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# RESEARCH MEMORANDUM

## EVALUATION OF GUST AND DRAFT VELOCITIES FROM FLIGHTS OF P-61C AIRPLANES WITHIN THUNDERSTORMS SEPTEMBER 4, 1947 TO SEPTEMBER 5, 1947 AT CLINTON COUNTY ARMY AIR FIELD, OHIO

By

Jack Funk

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RESEARCH MEMORANDUM

# EVALUATION OF GUST AND DRAFT VELOCITIES FROM FLIGHTS OF P-61C AIRPLANES WITHIN THUNDERSTORMS SEPTEMBER 4, 1947 TO SEPTEMBER 5, 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 County Army Air Field, Ohio, for the period of September 4, 1947 to September 5, 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.

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Langley Field, Va.

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Jack Funk
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Approved: John R. Westfall
for Richard V. Rhode
Chief of Aircraft Loads Division

bkb

REFERENCE

1. Funk, Jack: Evaluation of Gust and Draft Velocities from Flights of P-61C Airplanes within Thunderstorms August 13, 1947 to August 15, 1947 at Clinton County Army Air Field, Ohio. NACA RM No. L8A27, 1948.

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 |
|---|---|---|---|---|---|---|---|---|
| September 4, 1947 - Flight 33 | | | | | | | | |
| Airplane 356 - Traverse 1<br>Length of traverse 1213.1 sec | | | | | | | | |
| 0 - 80 | 19,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]80 - 90 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 90 - 110 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 110 - 120 | | ---- | -5.3 | ---- | ----- | --- | --- | 2 |
| 120 - 130 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]130 - 140 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 140 - 150 | | 4.6 | ----- | ---- | ----- | --- | --- | 1 |
| 150 - 160 | | ---- | -2.9 | ---- | -4.1 | --- | 390 | 1 |
| 160 - 180 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 180 - 190 | | 3.4 | ----- | 3.9 | ----- | 255 | --- | 1 |
| 190 - 240 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 240 - 250 | | 4.2 | ----- | ---- | ----- | --- | --- | 2 |
| 250 - 280 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 280 - 290 | 19,000 | 3.2 | ----- | ---- | ----- | --- | --- | 1 |
| [a]290 - 300 | | 2.4 | ----- | ---- | ----- | --- | --- | 1 |
| 300 - 600 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]600 - 610 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 610 - 890 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 890 - 900 | | ---- | -2.8 | ---- | -5.3 | --- | 87 | 1 |
| 900 - 1000 | 19,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1000 - 1010 | 19,500 | ---- | -4.0 | ---- | -5.3 | --- | 105 | 2 |
| 1010 - 1020 | 19,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]1020 - 1030 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1030 - 1060 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1060 - 1070 | | ---- | -3.3 | ---- | -6.0 | --- | 192 | 1 |
| 1070 - 1090 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1090 - 1100 | | ---- | -3.4 | ---- | -6.2 | --- | 142 | 1 |
| 1100 - 1110 | | ---- | -3.4 | ---- | ----- | --- | --- | 1 |
| 1110 - 1150 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1150 - 1160 | | 2.6 | ----- | ---- | ----- | --- | --- | 1 |
| 1160 - 1170 | | 4.1 | -6.1 | ---- | ----- | --- | --- | 2 |
| 1170 - 1180 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1180 - 1190 | | ---- | -3.2 | ---- | ----- | --- | --- | 2 |

[a]Cloud entry.
[b]Cloud 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 |
|---|---|---|---|---|---|---|---|---|
| September 4, 1947 - Flight 33 | | | | | | | | |
| Airplane 356 - Traverse 1<br>Length of traverse 1213.1 sec | | | | | | | | |
| 1190 - 1210 | 19,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]1210 - 1220 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| Airplane 356 - Traverse 2<br>Length of traverse 358.0 sec | | | | | | | | |
| 0 - 10 | 21,000 | 9.4 | -11.4 | ---- | ----- | --- | --- | 7 |
| 10 - 20 | | 4.6 | -3.8 | ---- | ----- | --- | --- | 3 |
| 20 - 30 | | 3.3 | -5.7 | ---- | -5.4 | --- | 298 | 2 |
| 30 - 40 | | ---- | -3.8 | ---- | ----- | --- | --- | 1 |
| 40 - 300 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 300 - 310 | | 2.5 | ----- | ---- | ----- | --- | --- | 1 |
| 310 - 360 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| Airplane 348 - Traverse 1<br>Length of traverse 1190.6 sec | | | | | | | | |
| 0 - 20 | 14,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 20 - 30 | | 6.0 | -2.8 | ---- | ----- | --- | --- | 2 |
| 30 - 40 | | 5.3 | -4.7 | ---- | ----- | --- | --- | 3 |
| 40 - 50 | | 4.8 | -4.6 | ---- | -7.3 | --- | 285 | 2 |
| 50 - 60 | | 6.5 | ----- | 4.5 | ----- | 256 | --- | 2 |
| 60 - 190 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 190 - 200 | | 3.6 | ----- | ---- | ----- | --- | --- | 1 |
| 200 - 270 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 270 - 280 | | 4.4 | -4.0 | ---- | ----- | --- | --- | 3 |
| 280 - 290 | | 5.9 | ----- | ---- | ----- | --- | --- | 5 |
| 290 - 300 | | 4.2 | -5.7 | ---- | ----- | --- | --- | 6 |
| 300 - 310 | | 3.6 | ----- | ---- | ----- | --- | --- | 1 |
| 310 - 320 | | 7.7 | ----- | ---- | ----- | --- | --- | 1 |
| 320 - 1200 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| Airplane 348 - Traverse 2<br>Length of traverse 320.9 sec | | | | | | | | |
| 0 - 330 | 16,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |

[b]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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 348 - Traverse 1<br>Length of traverse 948.6 sec | | | | | | | | |
| 0 - 10 | 19,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 10 - 20 | | 2.2 | -3.8 | 7.1 | ----- | 287 | --- | 2 |
| [a]20 - 30 | | ---- | -3.8 | ---- | ----- | --- | --- | 1 |
| 30 - 40 | | 3.8 | -6.0 | ---- | -7.9 | --- | 341 | 3 |
| 40 - 50 | | 1.3 | -5.4 | ---- | ----- | --- | --- | 2 |
| 50 - 60 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 60 - 70 | | 4.8 | -3.8 | ---- | ----- | --- | --- | 2 |
| 70 - 80 | | 1.9 | -5.7 | ---- | ----- | --- | --- | 5 |
| 80 - 90 | | 7.9 | ----- | ---- | ----- | --- | --- | 4 |
| 90 - 100 | | 10.8 | -5.1 | ---- | ----- | --- | --- | 8 |
| 100 - 110 | | 13.3 | -9.2 | ---- | ----- | --- | --- | 12 |
| 110 - 120 | 19,000 | 14.3 | -15.9 | ---- | ----- | --- | --- | 7 |
| 120 - 130 | | 9.8 | -15.9 | ---- | ----- | --- | --- | 8 |
| 130 - 140 | 19,500 | 4.4 | -7.9 | ---- | ----- | --- | --- | 5 |
| 140 - 150 | | 2.9 | -4.1 | ---- | ----- | --- | --- | 2 |
| 150 - 160 | | ---- | -5.4 | ---- | ----- | --- | --- | 4 |
| 160 - 170 | 19,000 | 2.9 | ----- | 6.9 | ----- | 164 | --- | 2 |
| 170 - 180 | | 2.2 | -5.1 | ---- | ----- | --- | --- | 2 |
| 180 - 190 | 19,500 | 2.5 | -4.1 | ---- | ----- | --- | --- | 2 |
| [b]190 - 200 | | ---- | -4.1 | ---- | -8.2 | --- | 116 | 1 |
| 200 - 210 | | 2.5 | ----- | ---- | ----- | --- | --- | 1 |
| 210 - 220 | | ---- | -5.1 | ---- | ----- | --- | --- | 1 |
| 220 - 230 | | ---- | -5.1 | ---- | ----- | --- | --- | 1 |
| 230 - 240 | | ---- | -7.6 | ---- | ----- | --- | --- | 2 |
| 240 - 250 | | ---- | -8.6 | ---- | ----- | --- | --- | 1 |
| 250 - 260 | | 8.9 | -9.2 | ---- | ----- | --- | --- | 7 |
| 260 - 270 | 19,000 | 4.1 | -7.6 | ---- | ----- | --- | --- | 2 |
| 270 - 280 | | 2.9 | -2.5 | ---- | ----- | --- | --- | 2 |
| 280 - 290 | | 2.5 | -4.4 | 4.6 | ----- | 112 | --- | 3 |
| 290 - 300 | | 2.5 | ----- | ---- | ----- | --- | --- | 2 |
| 300 - 330 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 330 - 340 | | 2.9 | ----- | ---- | ----- | --- | --- | 1 |
| 340 - 950 | 19,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |

[a]Cloud entry.
[b]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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 348 - Traverse 2<br>Length of traverse 1239.9 sec | | | | | | | | |
| 0 - 10 | 19,500 | 2.5 | -2.8 | ---- | ----- | --- | --- | 3 |
| 10 - 20 | | 6.0 | -12.2 | ---- | ----- | --- | --- | 4 |
| [a]20 - 30 | | 12.9 | -16.0 | ---- | ----- | --- | --- | 11 |
| 30 - 40 | | 11.0 | -17.6 | ---- | ----- | --- | --- | 12 |
| 40 - 50 | | 8.5 | ----- | ---- | ----- | --- | --- | 4 |
| 50 - 60 | 19,000 | 10.0 | -3.8 | ---- | ----- | --- | --- | 8 |
| 60 - 70 | | 4.4 | -10.7 | ---- | ----- | --- | --- | 9 |
| 70 - 80 | | 7.5 | -13.8 | ---- | ----- | --- | --- | 8 |
| 80 - 90 | | 4.4 | -8.5 | ---- | ----- | --- | --- | 5 |
| 90 - 100 | 18,500 | 24.8 | -17.9 | ---- | ----- | --- | --- | 6 |
| 100 - 110 | 19,000 | 7.2 | -12.2 | ---- | ----- | --- | --- | 6 |
| 110 - 120 | | 27.9 | ----- | ---- | ----- | --- | --- | 1 |
| 120 - 130 | | ---- | -6.9 | ---- | ----- | --- | --- | 2 |
| 130 - 140 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 140 - 150 | | 4.1 | -2.2 | ---- | ----- | --- | --- | 3 |
| 150 - 160 | | ---- | -6.6 | ---- | -7.2 | --- | 85 | 1 |
| 160 - 170 | | ---- | -4.4 | ---- | ----- | --- | --- | 2 |
| 170 - 180 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 180 - 190 | | ---- | -3.1 | ---- | ----- | --- | --- | 1 |
| 190 - 270 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 270 - 280 | | ---- | -4.1 | ---- | ----- | --- | --- | 2 |
| 280 - 330 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 330 - 340 | | ---- | -6.6 | ---- | ----- | --- | --- | 2 |
| 340 - 350 | | ---- | -2.5 | ---- | -11.4 | --- | 172 | 1 |
| 350 - 480 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 480 - 490 | | 2.8 | -8.4 | ---- | ----- | --- | --- | 8 |
| 490 - 500 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 500 - 510 | | 3.1 | ----- | ---- | ----- | --- | --- | 1 |
| 510 - 520 | | 2.2 | ----- | ---- | ----- | --- | --- | 1 |
| 520 - 530 | | ---- | -4.7 | ---- | ----- | --- | --- | 1 |
| 530 - 540 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 540 - 550 | | 2.5 | ----- | 4.2 | ----- | 9.2 | --- | 1 |
| 550 - 560 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 560 - 570 | | ---- | -5.3 | ---- | ----- | --- | --- | 1 |
| 570 - 580 | | ---- | -2.8 | ---- | ----- | --- | --- | 1 |

[a]Cloud entry.

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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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 348 - Traverse 2<br>Length of traverse 1239.9 sec | | | | | | | | |
| 580 - 600 | 19,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 600 - 610 | | 2.5 | ----- | ---- | ----- | --- | --- | 1 |
| 610 - 620 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 620 - 630 | 19,500 | 3.1 | -4.7 | ---- | ----- | --- | --- | 5 |
| 630 - 640 | | 2.5 | -2.8 | ---- | ----- | --- | --- | 2 |
| 640 - 650 | 19,000 | 2.5 | ----- | ---- | ----- | --- | --- | 1 |
| 650 - 660 | | 2.5 | -4.1 | ---- | ----- | --- | --- | 2 |
| 660 - 670 | 19,500 | 6.9 | -4.7 | ---- | ----- | --- | --- | 6 |
| 670 - 680 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 680 - 690 | 19,000 | 8.7 | -4.1 | ---- | ----- | --- | --- | 3 |
| 690 - 700 | | 7.2 | -7.2 | ---- | ----- | --- | --- | 3 |
| 700 - 710 | | 2.5 | ----- | ---- | ----- | --- | --- | 1 |
| 710 - 720 | 19,500 | ---- | -5.3 | ---- | ----- | --- | --- | 1 |
| 720 - 730 | 19,000 | 3.1 | ----- | ---- | ----- | --- | --- | 3 |
| 730 - 740 | | ---- | -5.3 | ---- | ----- | --- | --- | 1 |
| 740 - 750 | | 7.8 | ----- | 14.5 | ----- | 259 | --- | 1 |
| 750 - 760 | | 5.0 | -4.7 | ---- | -8.1 | --- | 122 | 6 |
| 760 - 770 | | 4.7 | -4.7 | ---- | ----- | --- | --- | 3 |
| 770 - 780 | | 2.5 | ----- | ---- | ----- | --- | --- | 2 |
| 780 - 790 | | ---- | -4.7 | ---- | ----- | --- | --- | 2 |
| 790 - 800 | | 3.1 | -2.8 | ---- | ----- | --- | --- | 3 |
| [b]800 - 810 | | 3.7 | -4.7 | ---- | ----- | --- | --- | 3 |
| 810 - 830 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 830 - 840 | | 4.1 | ----- | ---- | ----- | --- | --- | 1 |
| 840 - 850 | | 4.7 | ----- | ---- | ----- | --- | --- | 1 |
| 850 - 860 | | ---- | -8.7 | ---- | ----- | --- | --- | 1 |
| [a]860 - 870 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 870 - 880 | | ---- | -4.1 | ---- | ----- | --- | --- | 1 |
| 880 - 960 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 960 - 970 | | 17.7 | -9.6 | ---- | ----- | --- | --- | 8 |
| 970 - 980 | | .9 | -13.0 | ---- | ----- | --- | --- | 11 |
| 980 - 990 | | 7.5 | -5.3 | ---- | ----- | --- | --- | 10 |
| 990 - 1000 | 19,500 | 16.8 | -12.4 | ---- | ----- | --- | --- | 6 |
| 1000 - 1010 | | 7.8 | -12.1 | ---- | ----- | --- | --- | 13 |
| 1010 - 1020 | | 12.4 | -9.3 | ---- | ----- | --- | --- | 7 |

[a]Cloud entry.
[b]Cloud 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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 348 - Traverse 2<br>Length of traverse 1239.9 sec | | | | | | | | |
| 1020 - 1030 | 19,500 | 12.4 | -14.3 | ---- | ----- | --- | --- | 6 |
| 1030 - 1040 | | 7.5 | -9.9 | ---- | ----- | --- | --- | 5 |
| 1040 - 1050 | 19,000 | ---- | -9.3 | ---- | ----- | --- | --- | 2 |
| 1050 - 1060 | | 8.1 | -6.5 | ---- | ----- | --- | --- | 4 |
| 1060 - 1070 | | 5.0 | -2.8 | ---- | ----- | --- | --- | 4 |
| 1070 - 1080 | | 5.6 | -4.7 | ---- | -8.7 | --- | 267 | 2 |
| 1080 - 1090 | | 5.3 | -10.3 | ---- | -9.4 | --- | 69 | 6 |
| [b]1090 - 1100 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1100 - 1140 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1140 - 1150 | | 5.3 | -5.0 | ---- | ----- | --- | --- | 2 |
| 1150 - 1220 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1220 - 1240 | 18,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| Airplane 353 - Traverse 1<br>Length of traverse 486.1 sec | | | | | | | | |
| 0 - 10 | 15,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 10 - 20 | 14,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 20 - 30 | | 5.4 | ----- | 6.7 | ----- | 126 | --- | 1 |
| 30 - 40 | | 4.5 | -3.5 | ---- | ----- | --- | --- | 3 |
| 40 - 100 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 100 - 110 | | ---- | -2.9 | ---- | ----- | --- | --- | 1 |
| 110 - 120 | | 11.2 | -8.0 | ---- | ----- | --- | --- | 4 |
| 120 - 130 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]130 - 140 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 140 - 150 | | 8.0 | -3.2 | ---- | ----- | --- | --- | 2 |
| 150 - 160 | | 3.8 | -9.3 | ---- | -14.7 | --- | 141 | 5 |
| 160 - 170 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 170 - 180 | | 9.6 | -8.0 | ---- | ----- | --- | --- | 3 |
| 180 - 190 | | 11.2 | -14.1 | ---- | ----- | --- | --- | 8 |
| 190 - 200 | | 17.3 | -8.0 | ---- | ----- | --- | --- | 8 |
| 200 - 220 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]220 - 230 | | 2.0 | -2.9 | 7.8 | -5.0 | 217 | 151 | 4 |
| 230 - 240 | 15,000 | 13.8 | ----- | ---- | -7.2 | --- | 147 | 2 |
| 240 - 280 | | ---- | ----- | ---- | ----- | --- | --- | 0 |

[a]Cloud entry.
[b]Cloud 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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 353 - Traverse 1<br>Length of traverse 486.1 sec | | | | | | | | |
| 280 - 310 | 14,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 310 - 320 | | 15.0 | -6.7 | ---- | ----- | --- | --- | 3 |
| [a]320 - 330 | | 8.3 | -8.3 | 17.1 | ----- | 212 | --- | 2 |
| 330 - 340 | | 5.4 | -6.7 | ---- | ----- | --- | --- | 2 |
| 340 - 350 | | 12.8 | -2.9 | ---- | ----- | --- | --- | 2 |
| 350 - 360 | | 12.5 | -4.5 | ---- | -7.2 | --- | 170 | 3 |
| 360 - 370 | 15,000 | ---- | -4.2 | ---- | ----- | --- | --- | 2 |
| 370 - 380 | | 4.8 | -4.8 | ---- | ----- | --- | --- | 3 |
| 380 - 390 | | 10.9 | -6.7 | 19.2 | ----- | 104 | --- | 3 |
| 390 - 400 | | 5.8 | -9.3 | ---- | ----- | --- | --- | 4 |
| 400 - 410 | 15,500 | 4.2 | -5.1 | ---- | ----- | --- | --- | 2 |
| 410 - 420 | 15,000 | 5.8 | ----- | ---- | ----- | --- | --- | 1 |
| 420 - 450 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 450 - 460 | | 9.6 | -4.5 | ---- | ----- | --- | --- | 4 |
| [b]460 - 470 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 470 - 490 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| Airplane 353 - Traverse 2<br>Length of traverse 107.0 sec | | | | | | | | |
| 0 - 10 | 15,000 | 8.9 | -5.4 | ---- | ----- | --- | --- | 4 |
| 10 - 20 | | 4.8 | ----- | ---- | ----- | --- | --- | 1 |
| [a]20 - 30 | | 4.8 | -8.9 | ---- | ----- | --- | --- | 8 |
| 30 - 40 | | 5.1 | -6.4 | ---- | ----- | --- | --- | 4 |
| 40 - 50 | | 8.9 | -4.5 | 6.8 | ----- | 93 | --- | 3 |
| 50 - 60 | | 12.4 | -6.0 | ---- | ----- | --- | --- | 2 |
| 60 - 70 | | 7.0 | -8.6 | ---- | -8.9 | --- | 111 | 5 |
| 70 - 80 | | 9.9 | -7.3 | ---- | ----- | --- | --- | 4 |
| 80 - 90 | | 9.2 | -5.4 | ---- | ----- | --- | --- | 7 |
| 90 - 100 | | 5.7 | -14.3 | ---- | ----- | --- | --- | 4 |
| [b]100 - 110 | | 7.6 | ----- | ---- | ----- | --- | --- | 2 |

[a]Cloud entry.
[b]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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 353 - Traverse 3<br>Length of traverse 412.8 sec | | | | | | | | |
| 0 - 30 | 14,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 30 - 40 | 15,000 | 5.1 | -4.4 | ---- | ----- | --- | --- | 2 |
| 40 - 50 | 14,500 | 5.7 | -4.4 | 12.0 | ----- | 153 | --- | 5 |
| 50 - 60 | | 7.3 | -1.6 | ---- | ----- | --- | --- | 3 |
| [a]60 - 70 | | 10.7 | -6.6 | ---- | ----- | --- | --- | 4 |
| 70 - 80 | | 11.1 | -8.2 | ---- | ----- | --- | --- | 4 |
| 80 - 90 | | 12.3 | ----- | ---- | ----- | --- | --- | 2 |
| 90 - 100 | | 9.8 | -5.1 | ---- | ----- | --- | --- | 4 |
| 100 - 110 | | 5.1 | -8.2 | ---- | ----- | --- | --- | 2 |
| 110 - 120 | | 5.4 | -4.1 | ---- | ----- | --- | --- | 3 |
| 120 - 130 | | 8.2 | -5.4 | 19.1 | ----- | 203 | --- | 3 |
| 130 - 140 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 140 - 150 | | 6.6 | -7.9 | ---- | ----- | --- | --- | 2 |
| 150 - 160 | | 4.4 | -4.1 | ---- | ----- | --- | --- | 3 |
| 160 - 170 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 170 - 180 | | ---- | -2.8 | ---- | ----- | --- | --- | 1 |
| 180 - 190 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 190 - 200 | | 5.1 | ----- | ---- | ----- | --- | --- | 1 |
| 200 - 210 | | 7.3 | -3.5 | ---- | ----- | --- | --- | 5 |
| 210 - 220 | | 5.7 | ----- | ---- | ----- | --- | --- | 3 |
| 220 - 230 | | 4.7 | -8.2 | ---- | -16.4 | --- | 288 | 4 |
| 230 - 240 | | ---- | -4.7 | ---- | ----- | --- | --- | 2 |
| 240 - 250 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 250 - 260 | | 7.3 | -5.7 | ---- | ----- | --- | --- | 4 |
| 260 - 270 | | 9.8 | -3.5 | ---- | ----- | --- | --- | 8 |
| 270 - 280 | | 8.8 | -7.9 | ---- | ----- | --- | --- | 2 |
| 280 - 290 | | ---- | -6.0 | ---- | ----- | --- | --- | 1 |
| 290 - 310 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 310 - 320 | | 5.4 | -6.0 | ---- | ----- | --- | --- | 2 |
| 320 - 330 | | 7.6 | -9.2 | ---- | ----- | --- | --- | 4 |
| 330 - 340 | | ---- | -13.3 | ---- | ----- | --- | --- | 1 |
| 340 - 350 | | 4.7 | -4.7 | ---- | ----- | --- | --- | 3 |
| 350 - 360 | | ---- | -8.2 | ---- | ----- | --- | --- | 2 |
| 360 - 370 | | 10.1 | -10.7 | ---- | ----- | --- | --- | 4 |
| 370 - 380 | | ---- | -2.8 | ---- | -12.8 | --- | 257 | 1 |

[a]Cloud entry.

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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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 353 - Traverse 3<br>Length of traverse 412.8 sec | | | | | | | | |
| 380 - 390 | 14,500 | ---- | -3.8 | ---- | ----- | --- | --- | 1 |
| 390 - 400 | | ---- | -7.6 | ---- | ----- | --- | --- | 1 |
| [b]400 - 410 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 410 - 420 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| Airplane 353 - Traverse 4<br>Length of traverse 1443.0 sec | | | | | | | | |
| 0 - 10 | 13,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 10 - 20 | | 6.6 | ----- | ---- | ----- | --- | --- | 1 |
| 20 - 30 | | 7.2 | ----- | ---- | ----- | --- | --- | 1 |
| [a]30 - 40 | | ---- | -2.8 | ---- | ----- | --- | --- | 1 |
| [b]40 - 50 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 50 - 60 | | 2.8 | -4.4 | ---- | ----- | --- | --- | 2 |
| 60 - 70 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]70 - 80 | | 9.1 | -5.0 | 17.4 | ----- | 148 | --- | 6 |
| 80 - 90 | | ---- | -4.1 | ---- | ----- | --- | --- | 1 |
| 90 - 100 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 100 - 110 | | 5.0 | -1.9 | ---- | ----- | --- | --- | 3 |
| 110 - 120 | | 7.5 | -3.4 | 8.5 | ----- | 74 | --- | 4 |
| 120 - 130 | | 6.9 | -5.3 | ---- | ----- | --- | --- | 2 |
| 130 - 140 | | 12.5 | -6.6 | ---- | ----- | --- | --- | 2 |
| 140 - 150 | | ---- | -7.5 | ---- | ----- | --- | --- | 2 |
| 150 - 160 | | 9.1 | -8.8 | ---- | ----- | --- | --- | 3 |
| 160 - 170 | | 8.5 | -7.5 | ---- | ----- | --- | --- | 6 |
| 170 - 180 | | 9.1 | -11.6 | 18.5 | -21.7 | 313 | 142 | 5 |
| 180 - 190 | | 5.3 | -4.1 | ---- | ----- | --- | --- | 4 |
| 190 - 200 | | 4.4 | -4.1 | ---- | ----- | --- | --- | 3 |
| 200 - 210 | | 7.8 | -4.4 | ---- | ----- | --- | --- | 2 |
| 210 - 220 | | 8.5 | -3.4 | 9.0 | ----- | 141 | --- | 5 |
| 220 - 230 | | 8.1 | -4.4 | ---- | ----- | --- | --- | 2 |
| 230 - 250 | 14,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 250 - 260 | | ---- | -7.2 | ---- | ----- | --- | --- | 1 |
| 260 - 270 | 13,500 | 4.1 | -4.4 | ---- | ----- | --- | --- | 2 |

[a]Cloud entry.
[b]Cloud 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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 353 - Traverse 4<br>Length of traverse 1443.0 sec | | | | | | | | |
| 270 - 280 | 13,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 280 - 290 | 13,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 290 - 300 | | ---- | -2.8 | ---- | ----- | --- | --- | 1 |
| 300 - 380 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 380 - 390 | | 5.9 | -1.9 | 11.6 | ----- | 286 | --- | 3 |
| 390 - 400 | 12,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 400 - 410 | 13,000 | 4.1 | ----- | ---- | ----- | --- | --- | 1 |
| 410 - 440 | 13,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 440 - 450 | | ---- | -3.4 | ---- | ----- | --- | --- | 1 |
| 450 - 470 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 470 - 480 | | ---- | -4.1 | ---- | -11.4 | --- | 247 | 1 |
| 480 - 490 | | 5.3 | ----- | ---- | ----- | --- | --- | 1 |
| 490 - 500 | 13,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 500 - 510 | | 15.9 | ----- | ---- | ----- | --- | --- | 2 |
| 510 - 540 | 13,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 540 - 550 | | 4.1 | ----- | ---- | ----- | --- | --- | 1 |
| 550 - 580 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 580 - 590 | | 11.2 | -3.7 | ---- | ----- | --- | --- | 2 |
| 590 - 600 | | ---- | -3.7 | ---- | -4.8 | --- | 122 | 1 |
| 600 - 620 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 620 - 630 | | ---- | -6.9 | ---- | ----- | --- | --- | 1 |
| 630 - 650 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 650 - 660 | | 4.4 | -11.8 | ---- | -19.8 | --- | 50 | 3 |
| 660 - 670 | | 5.6 | -4.1 | ---- | ----- | --- | --- | 3 |
| 670 - 680 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 680 - 690 | | 5.9 | -4.1 | ---- | ----- | --- | --- | 3 |
| 690 - 740 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 740 - 750 | 13,000 | 14.3 | ----- | ---- | ----- | --- | --- | 2 |
| 750 - 760 | 13,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 760 - 770 | | 7.5 | -2.5 | 10.1 | ----- | 204 | --- | 2 |
| 770 - 780 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 780 - 790 | | 8.4 | -3.1 | ---- | ----- | --- | --- | 2 |
| [b]790 - 800 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 800 - 810 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 810 - 880 | | ---- | ----- | ---- | ----- | --- | --- | 0 |

[b]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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 353 - Traverse 4<br>Length of traverse 1443.0 sec | | | | | | | | |
| 880 - 890 | 13,500 | ---- | -3.7 | ---- | ----- | --- | --- | 1 |
| 890 - 900 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 900 - 910 | | 3.4 | ----- | ---- | ----- | --- | --- | 1 |
| 910 - 920 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a-b]920 - 930 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 930 - 960 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 960 - 970 | | 8.1 | ----- | ---- | ----- | --- | --- | 4 |
| [a]970 - 980 | | 14.6 | ----- | ---- | ----- | --- | --- | 1 |
| 980 - 990 | | ---- | -9.6 | ---- | ----- | --- | --- | 1 |
| 990 - 1000 | | 3.4 | -3.1 | ---- | ----- | --- | --- | 4 |
| 1000 - 1020 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1020 - 1030 | 14,000 | ---- | -9.3 | ---- | ----- | --- | --- | 2 |
| 1030 - 1040 | 13,500 | 8.7 | -9.0 | ---- | ----- | --- | --- | 4 |
| 1040 - 1050 | | ---- | -4.7 | ---- | ----- | --- | --- | 1 |
| 1050 - 1060 | | ---- | -2.2 | ---- | ----- | --- | --- | 1 |
| 1060 - 1070 | | 8.7 | ----- | ---- | ----- | --- | --- | 1 |
| 1070 - 1090 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1090 - 1100 | | ---- | -2.2 | ---- | ----- | --- | --- | 1 |
| 1100 - 1120 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1120 - 1130 | | 13.0 | ----- | ---- | ----- | --- | --- | 1 |
| 1130 - 1140 | 14,000 | 6.5 | -5.9 | ---- | ----- | --- | --- | 6 |
| 1140 - 1150 | 13,500 | 5.3 | -9.9 | ---- | ----- | --- | --- | 6 |
| 1150 - 1160 | | ---- | -2.8 | ---- | ----- | --- | --- | 1 |
| 1160 - 1170 | | 4.0 | ----- | ---- | ----- | --- | --- | 1 |
| 1170 - 1180 | | 9.9 | -6.5 | ---- | ----- | --- | --- | 7 |
| 1180 - 1190 | 13,000 | 5.6 | -3.1 | ---- | ----- | --- | --- | 6 |
| 1190 - 1200 | | 4.0 | ----- | ---- | ----- | --- | --- | 2 |
| 1200 - 1210 | 13,500 | 5.6 | ----- | ---- | ----- | --- | --- | 1 |
| 1210 - 1220 | | 5.9 | -4.3 | ---- | ----- | --- | --- | 3 |
| 1220 - 1230 | | ---- | -4.0 | ---- | ----- | --- | --- | 1 |
| 1230 - 1240 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]1240 - 1250 | | 4.7 | -3.4 | ---- | ----- | --- | --- | 2 |
| 1250 - 1260 | | 4.3 | -4.7 | ---- | ----- | --- | --- | 2 |
| 1260 - 1270 | | 4.0 | ----- | ---- | ----- | --- | --- | 1 |

[a]Cloud entry.
[b]Cloud 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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 353 - Traverse 4<br>Length of traverse 1443.0 sec | | | | | | | | |
| 1270 - 1280 | 13,500 | ---- | -4.7 | ---- | ----- | --- | --- | 1 |
| 1280 - 1290 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1290 - 1300 | | ---- | -7.1 | ---- | -11.4 | --- | 67 | 1 |
| 1300 - 1310 | | 4.7 | ----- | ---- | ----- | --- | --- | 1 |
| 1310 - 1320 | | 6.8 | ----- | ---- | ----- | --- | --- | 1 |
| 1320 - 1330 | | 5.9 | -3.7 | 11.7 | ----- | 237 | --- | 2 |
| 1330 - 1340 | | 9.9 | ----- | ---- | ----- | --- | --- | 1 |
| 1340 - 1350 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1350 - 1360 | 14,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1360 - 1370 | | 2.2 | -9.6 | ---- | ----- | --- | --- | 3 |
| 1370 - 1380 | 13,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1380 - 1390 | | ---- | -3.4 | ---- | ----- | --- | --- | 1 |
| 1390 - 1400 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1400 - 1410 | | 5.9 | -4.0 | ---- | ----- | --- | --- | 4 |
| 1410 - 1450 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| Airplane 333 - Traverse 1<br>Length of traverse 2607.1 sec | | | | | | | | |
| 0 - 100 | 9,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 100 - 110 | | ---- | -4.1 | ---- | ----- | --- | --- | 2 |
| [a]110 - 120 | | 3.5 | ----- | 5.1 | ----- | 66 | --- | 1 |
| 120 - 130 | | 3.5 | -5.4 | ---- | ----- | --- | --- | 4 |
| 130 - 140 | | 3.5 | -3.8 | ---- | ----- | --- | --- | 2 |
| 140 - 190 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 190 - 200 | | 5.1 | ----- | ---- | ----- | --- | --- | 2 |
| 200 - 230 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]230 - 240 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 240 - 250 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 250 - 260 | | 6.4 | -5.7 | ---- | -7.0 | --- | 75 | 4 |
| 260 - 270 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 270 - 280 | | 3.8 | ----- | ---- | ----- | --- | --- | 1 |
| 280 - 290 | | ---- | -3.2 | ---- | ----- | --- | --- | 1 |
| 290 - 300 | | 3.8 | -4.8 | ---- | ----- | --- | --- | 3 |
| 300 - 310 | | 2.2 | ----- | 5.0 | ----- | 75 | --- | 3 |

[a]Cloud entry.
[b]Cloud 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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 333 - Traverse 1<br>Length of traverse 2607.1 sec | | | | | | | | |
| 310 - 320 | 9,500 | 6.4 | -3.8 | 6.6 | ----- | 71 | --- | 3 |
| 320 - 330 | | 6.4 | ----- | ---- | ----- | --- | --- | 3 |
| 330 - 340 | | ---- | -6.7 | ---- | -6.6 | --- | 150 | 1 |
| 340 - 350 | | 3.8 | -3.2 | ---- | ----- | --- | --- | 2 |
| 350 - 360 | | 4.8 | ----- | ---- | ----- | --- | --- | 2 |
| 360 - 370 | 9,000 | 7.3 | -5.1 | ---- | ----- | --- | --- | 4 |
| 370 - 380 | | 5.4 | ----- | ---- | ----- | --- | --- | 1 |
| 380 - 400 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 400 - 410 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 410 - 420 | 9,500 | 7.6 | ----- | ---- | ----- | --- | --- | 1 |
| 420 - 430 | | 4.1 | -4.1 | ---- | ----- | --- | --- | 2 |
| 430 - 440 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 440 - 450 | | 4.1 | -5.4 | ---- | ----- | --- | --- | 2 |
| 450 - 460 | | ---- | -5.4 | ---- | ----- | --- | --- | 1 |
| 460 - 490 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 490 - 500 | | 6.1 | -7.3 | 7.0 | ----- | 75 | --- | 3 |
| 500 - 520 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 520 - 530 | | ---- | -4.5 | ---- | -7.3 | --- | 133 | 2 |
| 530 - 540 | | ---- | -4.5 | ---- | ----- | --- | --- | 1 |
| 540 - 550 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 550 - 560 | | 8.2 | -4.1 | ---- | ----- | --- | --- | 3 |
| 560 - 570 | | ---- | -5.1 | ---- | ----- | --- | --- | 4 |
| 570 - 580 | | ---- | -7.6 | ---- | ----- | --- | --- | 2 |
| 580 - 590 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 590 - 600 | | ---- | -5.1 | ---- | ----- | --- | --- | 2 |
| 600 - 610 | | ---- | -5.1 | ---- | ----- | --- | --- | 1 |
| [a-b]610 - 620 | | ---- | -4.1 | ---- | ----- | --- | --- | 1 |
| 620 - 630 | | 4.8 | ----- | ---- | ----- | --- | --- | 2 |
| 630 - 640 | | 6.7 | -4.1 | ---- | ----- | --- | --- | 3 |
| 640 - 650 | | 3.2 | -4.1 | ---- | ----- | --- | --- | 2 |
| 650 - 660 | | ---- | -3.8 | ---- | ----- | --- | --- | 1 |
| [a]660 - 670 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 670 - 680 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 680 - 690 | | ---- | -5.7 | ---- | ----- | --- | --- | 1 |

[a] Cloud entry.
[b] 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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 333 - Traverse 1<br>Length of traverse 2607.1 sec | | | | | | | | |
| 690 - 700 | 9,500 | 3.5 | -4.8 | ---- | ----- | --- | --- | 3 |
| 700 - 710 | | 5.4 | ----- | ---- | ----- | --- | --- | 1 |
| 710 - 720 | | ---- | -3.8 | ---- | ----- | --- | --- | 1 |
| 720 - 730 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 730 - 740 | | 3.8 | ----- | ---- | ----- | --- | --- | 2 |
| 740 - 750 | | 2.9 | ----- | 6.4 | ----- | 85 | --- | 1 |
| 750 - 760 | | 4.4 | -1.0 | ---- | ----- | --- | --- | 4 |
| 760 - 770 | | 7.0 | -4.8 | ---- | ----- | --- | --- | 4 |
| 770 - 780 | | ---- | -4.1 | ---- | ----- | --- | --- | 2 |
| [b]780 - 790 | | ---- | -5.7 | ---- | ----- | --- | --- | 1 |
| 790 - 800 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]800 - 810 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 810 - 850 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]850 - 860 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 860 - 870 | | ---- | -6.0 | ---- | ----- | --- | --- | 3 |
| 870 - 880 | | 7.6 | -7.6 | ---- | ----- | --- | --- | 5 |
| 880 - 890 | | 6.7 | -4.4 | ---- | ----- | --- | --- | 5 |
| 890 - 900 | | 7.3 | -5.1 | ---- | ----- | --- | --- | 6 |
| 900 - 910 | | 6.0 | ----- | ---- | ----- | --- | --- | 4 |
| 910 - 920 | 9,000 | ---- | -4.1 | ---- | ----- | --- | --- | 1 |
| 920 - 930 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 930 - 940 | | 6.0 | -3.5 | 5.2 | ----- | 107 | --- | 2 |
| 940 - 1120 | 9,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1120 - 1130 | | 5.4 | ----- | ---- | ----- | --- | --- | 1 |
| 1130 - 1140 | 9,000 | 5.7 | ----- | ---- | ----- | --- | --- | 3 |
| 1140 - 1270 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1270 - 1280 | | ---- | -4.1 | 5.2 | ----- | 107 | --- | 2 |
| 1280 - 1290 | | ---- | -3.2 | ---- | 4.0 | --- | 118 | 1 |
| 1290 - 1340 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]1340 - 1350 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1350 - 1370 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1370 - 1380 | | 3.8 | ----- | ---- | ----- | --- | --- | 1 |
| 1380 - 1390 | | ---- | -3.8 | ---- | ----- | --- | --- | 1 |
| 1390 - 1400 | | ---- | ----- | ---- | ----- | --- | --- | 0 |

[a]Cloud entry.
[b]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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 333 - Traverse 1<br>Length of traverse 2607.1 sec | | | | | | | | |
| 1400 - 1410 | 9,000 | ---- | -3.8 | ---- | ----- | --- | --- | 1 |
| 1410 - 1420 | | 3.5 | -3.8 | ---- | ----- | --- | --- | 4 |
| 1420 - 1430 | | 4.4 | ----- | ---- | ----- | --- | --- | 1 |
| 1430 - 1440 | | 3.8 | ----- | ---- | ----- | --- | --- | 1 |
| 1440 - 1450 | | 6.3 | ----- | 11.1 | ----- | 124 | --- | 2 |
| 1450 - 1460 | | 2.8 | -4.1 | 11.1 | ----- | 133 | --- | 4 |
| 1460 - 1480 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1480 - 1490 | | 3.5 | ----- | ---- | ----- | --- | --- | 1 |
| 1490 - 1500 | | 3.5 | ----- | ---- | ----- | --- | --- | 1 |
| 1500 - 1520 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1520 - 1530 | | ---- | -3.8 | ---- | ----- | --- | --- | 1 |
| 1530 - 1550 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1550 - 1560 | | 3.5 | ----- | ---- | ----- | --- | --- | 1 |
| 1560 - 1570 | | ---- | -3.5 | ---- | -4.5 | --- | 186 | 1 |
| 1570 - 1580 | | 6.3 | -5.0 | ---- | ----- | --- | --- | 4 |
| 1580 - 1590 | 8,500 | 4.1 | ----- | ---- | ----- | --- | --- | 1 |
| 1590 - 1600 | | ---- | -4.4 | ---- | ----- | --- | --- | 2 |
| 1600 - 1610 | | ---- | -7.3 | ---- | ----- | --- | --- | 2 |
| 1610 - 1620 | | 3.5 | -13.2 | ---- | ----- | --- | --- | 2 |
| 1620 - 1630 | | 6.9 | -6.3 | ---- | ----- | --- | --- | 9 |
| 1630 - 1640 | | 3.4 | -2.8 | ---- | ----- | --- | --- | 2 |
| 1640 - 1650 | 8,000 | 12.5 | ----- | ---- | ----- | --- | --- | 1 |
| 1650 - 1790 | 7,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1790 - 1800 | 7,000 | 4.4 | ----- | ---- | ----- | --- | --- | 2 |
| 1800 - 1860 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1860 - 1950 | 7,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]1950 - 1960 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1960 - 2150 | 8,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 2150 - 2160 | | 4.4 | -4.7 | 5.5 | ----- | 209 | --- | 3 |
| 2160 - 2170 | | 3.4 | ----- | ---- | ----- | --- | --- | 1 |
| 2170 - 2190 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 2190 - 2200 | | 4.4 | ----- | ---- | ----- | --- | --- | 1 |
| 2200 - 2210 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 2210 - 2220 | | ---- | -3.1 | ---- | ----- | --- | --- | 1 |
| 2220 - 2260 | | ---- | ----- | ---- | ----- | --- | --- | 0 |

[b]Flight 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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 34 | | | | | | | | |
| Airplane 333 - Traverse 1<br>Length of traverse 2607.1 sec | | | | | | | | |
| 2260 - 2270 | 8,000 | 3.7 | ----- | ---- | ----- | --- | --- | 1 |
| 2270 - 2280 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 2280 - 2290 | | 5.0 | ----- | ---- | ----- | --- | --- | 2 |
| 2290 - 2300 | 7,500 | 7.8 | -2.2 | 4.7 | -1.4 | 291 | 198 | 2 |
| 2300 - 2310 | | 9.7 | ----- | 5.9 | ----- | 177 | --- | 4 |
| 2310 - 2510 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 2510 - 2520 | 6,000 | 9.1 | ----- | ---- | ----- | --- | --- | 1 |
| 2520 - 2530 | | 5.6 | ----- | ---- | ----- | --- | --- | 1 |
| 2530 - 2540 | | 5.6 | ----- | ---- | ----- | --- | --- | 1 |
| 2540 - 2550 | | 3.4 | ----- | 8.3 | ----- | 180 | --- | 1 |
| 2550 - 2610 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 348 - Traverse 1<br>Length of traverse 617.0 sec | | | | | | | | |
| 0 - 10 | 15,000 | 1.9 | ----- | ---- | ----- | --- | --- | 1 |
| 10 - 20 | | 5.1 | -6.1 | ---- | ----- | --- | --- | 2 |
| [a]20 - 30 | | 1.9 | -5.1 | ---- | ----- | --- | --- | 5 |
| 30 - 40 | | 7.0 | -6.1 | ---- | ----- | --- | --- | 6 |
| 40 - 50 | | 6.1 | -12.8 | ---- | ----- | --- | --- | 3 |
| 50 - 60 | | 4.1 | -7.3 | ---- | ----- | --- | --- | 6 |
| 60 - 70 | | 2.6 | ----- | ---- | ----- | --- | --- | 3 |
| 70 - 80 | | 2.2 | -7.0 | ---- | ----- | --- | --- | 3 |
| 80 - 90 | | 4.1 | -8.3 | ---- | ----- | --- | --- | 9 |
| 90 - 100 | | 2.9 | -8.0 | ---- | ----- | --- | --- | 4 |
| 100 - 110 | | 1.0 | -6.1 | ---- | ----- | --- | --- | 4 |
| 110 - 120 | | ---- | -10.2 | ---- | ----- | --- | --- | 1 |
| 120 - 130 | 14,500 | 3.2 | -8.0 | ---- | ----- | --- | --- | 6 |
| 130 - 140 | | 6.1 | -7.7 | ---- | ----- | --- | --- | 3 |
| 140 - 150 | | 7.3 | -6.4 | ---- | ----- | --- | --- | 7 |
| 150 - 160 | 15,000 | 3.2 | ----- | ---- | ----- | --- | --- | 3 |
| 160 - 170 | | 3.2 | -8.3 | ---- | ----- | --- | --- | 2 |
| 170 - 180 | | 1.9 | -4.1 | ---- | ----- | --- | --- | 3 |

[a]Cloud entry.

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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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 348 - Traverse 1<br>Length of traverse 617.0 sec | | | | | | | | |
| 180 - 190 | 15,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 190 - 200 | | 16.9 | -11.8 | ---- | ----- | --- | --- | 3 |
| 200 - 210 | | 7.3 | -13.4 | ---- | ----- | --- | --- | 7 |
| 210 - 220 | | 9.6 | -15.6 | ---- | ----- | --- | --- | 5 |
| 220 - 230 | | 3.2 | -7.0 | ---- | -7.5 | --- | 77 | 3 |
| 230 - 240 | | 3.2 | ----- | ---- | ----- | --- | --- | 1 |
| 240 - 250 | | 1.9 | ----- | ---- | ----- | --- | --- | 1 |
| 250 - 260 | | 5.1 | -6.7 | ---- | ----- | --- | --- | 5 |
| 260 - 270 | | 3.5 | -7.7 | ---- | ----- | --- | --- | 5 |
| 270 - 280 | | 2.9 | -8.6 | ---- | ----- | --- | --- | 3 |
| 280 - 290 | | 4.1 | -7.0 | ---- | ----- | --- | --- | 3 |
| 290 - 300 | | 7.3 | -5.4 | ---- | ----- | --- | --- | 2 |
| 300 - 310 | | 1.9 | -5.1 | ---- | ----- | --- | --- | 3 |
| 310 - 320 | | ---- | -8.3 | ---- | ----- | --- | --- | 4 |
| 320 - 330 | 14,500 | 3.2 | -5.1 | 2.8 | ----- | 121 | --- | 2 |
| 330 - 340 | 15,000 | ---- | -5.7 | ---- | ----- | --- | --- | 1 |
| 340 - 350 | | ---- | -7.7 | ---- | ----- | --- | --- | 3 |
| 350 - 360 | | 4.1 | -5.7 | 5.6 | -10.6 | 103 | 199 | 2 |
| 360 - 370 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 370 - 380 | | 4.5 | -10.2 | ---- | ----- | --- | --- | 5 |
| 380 - 390 | | 12.1 | -8.6 | ---- | ----- | --- | --- | 4 |
| 390 - 400 | | 1.9 | -5.1 | ---- | ----- | --- | --- | 5 |
| 400 - 410 | 14,500 | ---- | -7.7 | ---- | ----- | --- | --- | 1 |
| 410 - 420 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 420 - 430 | | 1.9 | -5.4 | ---- | ----- | --- | --- | 3 |
| 430 - 450 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 450 - 460 | | 6.4 | -5.1 | ---- | ----- | --- | --- | 8 |
| 460 - 470 | | 3.8 | -8.6 | ---- | ----- | --- | --- | 6 |
| 470 - 480 | | 5.7 | -7.0 | ---- | ----- | --- | --- | 5 |
| 480 - 490 | | ---- | -7.0 | ---- | ----- | --- | --- | 3 |
| 490 - 500 | | ---- | -5.1 | ---- | ----- | --- | --- | 1 |
| 500 - 510 | 15,000 | 12.1 | -5.1 | ---- | ----- | --- | --- | 5 |
| 510 - 520 | | 12.4 | -15.6 | ---- | ----- | --- | --- | 5 |
| 520 - 530 | | 8.6 | -7.0 | ---- | ----- | --- | --- | 6 |
| 530 - 540 | | 1.6 | -12.4 | ---- | ----- | --- | --- | 5 |

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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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 348 - Traverse 1<br>Length of traverse 617.0 sec | | | | | | | | |
| 540 - 550 | 15,000 | 11.8 | -14.7 | ---- | ----- | --- | --- | 3 |
| 550 - 560 | | 4.1 | ----- | ---- | ----- | --- | --- | 1 |
| 560 - 570 | 15,500 | ---- | -6.1 | ---- | ----- | --- | --- | 1 |
| 570 - 580 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]580 - 590 | | ---- | -2.2 | ---- | -14.4 | --- | 136 | 1 |
| 590 - 600 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 600 - 610 | | 4.8 | ----- | ---- | ----- | --- | --- | 1 |
| 610 - 620 | | ---- | -5.7 | ---- | ----- | --- | --- | 2 |
| Airplane 348 - Traverse 2<br>Length of traverse 254.0 sec | | | | | | | | |
| 0 - 10 | 15,000 | 7.0 | -10.1 | ---- | ----- | --- | --- | 9 |
| 10 - 20 | | 6.7 | -8.2 | ---- | ----- | --- | --- | 7 |
| [a]20 - 30 | | 2.9 | -7.6 | ---- | ----- | --- | --- | 7 |
| 30 - 40 | | 8.2 | -10.1 | ---- | ----- | --- | --- | 5 |
| 40 - 50 | | 7.0 | -10.1 | ---- | ----- | --- | --- | 7 |
| 50 - 60 | | 5.7 | -8.9 | ---- | ----- | --- | --- | 7 |
| 60 - 70 | | 7.9 | -10.1 | ---- | ----- | --- | --- | 4 |
| 70 - 80 | | 7.0 | -14.9 | ---- | ----- | --- | --- | 4 |
| 80 - 90 | | 16.2 | -10.8 | ---- | ----- | --- | --- | 12 |
| 90 - 100 | 14,500 | 8.2 | -15.5 | ---- | ----- | --- | --- | 9 |
| 100 - 110 | | 6.7 | -12.0 | ---- | ----- | --- | --- | 5 |
| 110 - 120 | 15,000 | 12.7 | -10.1 | ---- | ----- | --- | --- | 4 |
| 120 - 130 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 130 - 140 | | ---- | -5.7 | ---- | ----- | --- | --- | 1 |
| 140 - 150 | | 8.6 | -8.2 | ---- | ----- | --- | --- | 5 |
| 150 - 160 | | 3.2 | -7.9 | ---- | ----- | --- | --- | 7 |
| 160 - 170 | | 6.0 | -11.1 | ---- | ----- | --- | --- | 4 |
| 170 - 180 | | 1.9 | -5.1 | ---- | ----- | --- | --- | 2 |
| 180 - 190 | | 4.1 | -11.1 | ---- | ----- | --- | --- | 6 |
| 190 - 200 | | 6.0 | -12.7 | ---- | ----- | --- | --- | 7 |
| 200 - 210 | | 10.8 | -8.9 | ---- | ----- | --- | --- | 11 |
| 210 - 220 | | 8.2 | -14.9 | ---- | ----- | --- | --- | 13 |

[a]Cloud entry.
[b]Cloud 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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 348 - Traverse 2<br>Length of traverse 254.0 sec | | | | | | | | |
| 220 - 230 | 15,000 | 5.7 | -11.1 | ---- | ----- | --- | --- | 5 |
| 230 - 250 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]250 - 260 | | 1.0 | -5.4 | ---- | ----- | --- | --- | 3 |
| Airplane 348 - Traverse 3<br>Length of traverse 1358.6 sec | | | | | | | | |
| 0 - 10 | 15,000 | 1.6 | -5.4 | ---- | ----- | --- | --- | 5 |
| 10 - 20 | | 2.5 | -5.7 | ---- | ----- | --- | --- | 5 |
| [a]20 - 30 | | 8.2 | -1.3 | ---- | ----- | --- | --- | 6 |
| 30 - 40 | 14,500 | ---- | -12.3 | ---- | ----- | --- | --- | 3 |
| 40 - 50 | | 5.7 | -13.2 | ---- | ----- | --- | --- | 5 |
| 50 - 60 | | 2.8 | -7.6 | ---- | ----- | --- | --- | 6 |
| 60 - 70 | | 11.4 | -5.4 | ---- | ----- | --- | --- | 6 |
| 70 - 80 | | 4.4 | -10.1 | ---- | ----- | --- | --- | 3 |
| 80 - 90 | | 1.9 | -6.3 | ---- | ----- | --- | --- | 3 |
| 90 - 100 | 15,000 | 5.0 | ----- | ---- | ----- | --- | --- | 2 |
| 100 - 110 | 14,500 | ---- | -7.6 | ---- | ----- | --- | --- | 2 |
| 110 - 120 | 15,000 | 11.4 | -7.3 | ---- | ----- | --- | --- | 5 |
| 120 - 130 | | 8.8 | -14.5 | ---- | ----- | --- | --- | 3 |
| 130 - 140 | | 6.6 | -23.0 | ---- | ----- | --- | --- | 4 |
| 140 - 150 | 15,500 | 7.3 | -8.8 | ---- | ----- | --- | --- | 6 |
| 150 - 160 | | 4.7 | -8.8 | ---- | -16.5 | --- | 177 | 5 |
| 160 - 170 | | 6.3 | -9.1 | ---- | ----- | --- | --- | 5 |
| 170 - 180 | | 4.4 | -7.3 | ---- | ----- | --- | --- | 6 |
| 180 - 190 | 15,000 | 3.2 | ----- | ---- | ----- | --- | --- | 1 |
| 190 - 200 | | 2.2 | -11.4 | ---- | 3.1 | --- | 57 | 5 |
| 200 - 210 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 210 - 230 | 15,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 230 - 240 | | 2.3 | -7.6 | ---- | -15.8 | --- | 92 | 5 |
| 240 - 250 | | 6.0 | -14.8 | ---- | ----- | --- | --- | 6 |
| 250 - 260 | | 2.2 | -11.4 | 7.7 | ----- | 110 | --- | 3 |
| 260 - 270 | 15,000 | 4.7 | ----- | ---- | ----- | --- | --- | 5 |
| 270 - 280 | | 6.0 | -12.3 | ---- | ----- | --- | --- | 5 |

[a]Cloud entry.
[b]Cloud 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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 348 - Traverse 3<br>Length of traverse 1358.6 sec | | | | | | | | |
| 280 - 290 | 15,000 | 2.5 | -8.8 | ---- | ----- | --- | --- | 5 |
| 290 - 300 | | 6.0 | -8.8 | ---- | ----- | --- | --- | 8 |
| 300 - 310 | | 3.5 | -7.9 | ---- | ----- | --- | --- | 4 |
| 310 - 320 | | 8.2 | -8.8 | ---- | ----- | --- | --- | 3 |
| 320 - 330 | | 5.0 | -8.8 | ---- | ----- | --- | --- | 8 |
| 330 - 340 | | 3.2 | -6.0 | ---- | ----- | --- | --- | 9 |
| 340 - 350 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 350 - 360 | | 6.9 | -6.0 | ---- | ----- | --- | --- | 8 |
| 360 - 370 | | 4.7 | -8.5 | 3.4 | ----- | 104 | --- | 6 |
| 370 - 380 | | 1.9 | -5.4 | ---- | ----- | --- | --- | 3 |
| 380 - 390 | | 1.9 | ----- | ---- | ----- | --- | --- | 2 |
| 390 - 400 | | ---- | -2.2 | ---- | ----- | --- | --- | 2 |
| 400 - 410 | 15,500 | 5.4 | -5.7 | ---- | ----- | --- | --- | 3 |
| 410 - 420 | | ---- | -5.4 | ---- | ----- | --- | --- | 1 |
| 420 - 430 | 15,000 | ---- | -3.8 | ---- | ----- | --- | --- | 1 |
| 430 - 440 | | 2.2 | -7.6 | ---- | ----- | --- | --- | 3 |
| 440 - 460 | 14,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 460 - 470 | 15,000 | ---- | -6.9 | ---- | ----- | --- | --- | 2 |
| 470 - 480 | 14,500 | 4.1 | -6.3 | ---- | ----- | --- | --- | 2 |
| [b]480 - 490 | 15,000 | 3.5 | -2.5 | 5.7 | ----- | 88 | --- | 3 |
| 490 - 500 | | 3.2 | -5.0 | ---- | ----- | --- | --- | 2 |
| [a]500 - 510 | | ---- | -5.0 | ---- | ----- | --- | --- | 3 |
| 510 - 520 | | 6.9 | -11.4 | ---- | ----- | --- | --- | 7 |
| 520 - 530 | | 6.6 | -6.6 | ---- | ----- | --- | --- | 5 |
| 530 - 540 | 14,500 | 2.8 | -5.4 | ---- | ----- | --- | --- | 2 |
| 540 - 550 | 15,000 | 2.5 | -5.0 | ---- | ----- | --- | --- | 5 |
| 550 - 560 | | ---- | -6.3 | ---- | ----- | --- | --- | 4 |
| 560 - 570 | 14,500 | 3.5 | -4.1 | ---- | ----- | --- | --- | 6 |
| 570 - 580 | | 2.8 | -4.1 | ---- | ----- | --- | --- | 3 |
| 580 - 590 | 15,000 | 6.0 | -9.8 | ---- | ----- | --- | --- | 3 |
| 590 - 600 | | 9.8 | -5.0 | ---- | ----- | --- | --- | 6 |
| 600 - 610 | | 2.8 | -12.0 | ---- | ----- | --- | --- | 8 |
| 610 - 620 | | 8.2 | -7.9 | ---- | ----- | --- | --- | 10 |
| 620 - 630 | | 12.6 | -11.0 | ---- | ----- | --- | --- | 5 |

[a]Cloud entry.
[b]Cloud 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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 348 - Traverse 3<br>Length of traverse 1358.6 sec | | | | | | | | |
| 630 - 640 | 15,000 | 6.3 | -11.7 | ---- | ----- | --- | --- | 8 |
| 640 - 650 | | 4.1 | -7.3 | ---- | ----- | --- | --- | 6 |
| 650 - 660 | 15,500 | 10.7 | -12.3 | ---- | ----- | --- | --- | 5 |
| 660 - 670 | 15,000 | 9.1 | -11.4 | ---- | ----- | --- | --- | 6 |
| 670 - 680 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 680 - 690 | 15,500 | 3.8 | -7.9 | ---- | ----- | --- | --- | 8 |
| 690 - 700 | | 4.4 | -10.4 | ---- | ----- | --- | --- | 9 |
| 700 - 710 | 15,000 | 10.4 | -5.0 | ---- | ----- | --- | --- | 5 |
| 710 - 720 | | 10.7 | -14.5 | ---- | ----- | --- | --- | 7 |
| 720 - 730 | | 8.5 | -6.3 | ---- | ----- | --- | --- | 6 |
| 730 - 740 | | ---- | -6.6 | ---- | ----- | --- | --- | 3 |
| 740 - 750 | | 24.0 | -6.6 | ---- | ----- | --- | --- | 2 |
| 750 - 760 | | 2.2 | -5.0 | ---- | ----- | --- | --- | 3 |
| 760 - 770 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 770 - 780 | | 8.5 | -14.2 | ---- | ----- | --- | --- | 4 |
| 780 - 790 | | 9.8 | -20.5 | ---- | ----- | --- | --- | 8 |
| 790 - 800 | | 7.6 | -10.7 | ---- | ----- | --- | --- | 6 |
| 800 - 810 | | 9.8 | -16.7 | ---- | ----- | --- | --- | 6 |
| 810 - 820 | | 12.6 | -17.3 | ---- | ----- | --- | --- | 6 |
| 820 - 830 | | 8.2 | -9.8 | ---- | ----- | --- | --- | 5 |
| 830 - 840 | | 11.0 | -10.7 | ---- | ----- | --- | --- | 6 |
| 840 - 850 | | 3.5 | -12.3 | ---- | ----- | --- | --- | 5 |
| 850 - 860 | | 3.8 | -8.2 | ---- | ----- | --- | --- | 4 |
| 860 - 870 | | 4.1 | -7.3 | ---- | ----- | --- | --- | 2 |
| [b]870 - 880 | | 11.7 | ----- | 9.2 | ----- | 183 | --- | 4 |
| 880 - 890 | | 12.9 | -10.7 | ---- | ----- | --- | --- | 4 |
| 890 - 900 | 14,500 | 9.1 | -10.4 | ---- | ----- | --- | --- | 4 |
| 900 - 910 | | 14.5 | -6.3 | ---- | ----- | --- | --- | 2 |
| 910 - 920 | 15,000 | 8.5 | ----- | ---- | ----- | --- | --- | 4 |
| 920 - 930 | | 2.8 | -5.0 | ---- | ----- | --- | --- | 2 |
| 930 - 940 | | 6.3 | -7.9 | ---- | ----- | --- | --- | 7 |
| [a]940 - 950 | | ---- | -7.6 | ---- | ----- | --- | --- | 2 |
| 950 - 960 | | ---- | -5.0 | ---- | ----- | --- | --- | 2 |
| 960 - 970 | 14,500 | 1.8 | -5.7 | ---- | ----- | --- | --- | 4 |

[a]Cloud entry.
[b]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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 348 - Traverse 3<br>Length of traverse 1358.6 sec | | | | | | | | |
| [b]970 - 980 | 14,500 | 4.4 | -6.3 | ---- | ----- | --- | --- | 2 |
| 980 - 990 | 15,000 | 4.7 | -5.4 | 5.1 | ----- | 329 | --- | 3 |
| 990 - 1000 | | ---- | -6.0 | ---- | ----- | --- | --- | 1 |
| [a]1000 - 1010 | | 6.3 | -6.3 | ---- | ----- | --- | --- | 7 |
| 1010 - 1020 | 14,500 | 6.6 | -14.5 | ---- | ----- | --- | --- | 7 |
| 1020 - 1030 | 15,000 | 6.0 | -7.6 | ---- | ----- | --- | --- | 3 |
| 1030 - 1040 | | 4.7 | -11.4 | ---- | ----- | --- | --- | 5 |
| 1040 - 1050 | 14,500 | 4.7 | -4.7 | ---- | ----- | --- | --- | 2 |
| 1050 - 1060 | | 3.8 | -7.9 | ---- | ----- | --- | --- | 4 |
| 1060 - 1070 | 15,000 | 3.5 | -4.7 | ---- | ----- | --- | --- | 3 |
| 1070 - 1080 | 14,500 | 3.8 | -6.3 | 3.5 | ----- | 32 | --- | 6 |
| 1080 - 1090 | | 4.4 | ----- | ---- | ----- | --- | --- | 1 |
| 1090 - 1100 | 15,000 | ---- | -5.7 | ---- | ----- | --- | --- | 1 |
| 1100 - 1110 | | 4.1 | -11.0 | ---- | ----- | --- | --- | 5 |
| 1110 - 1120 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1120 - 1130 | 14,500 | 7.3 | -9.1 | ---- | ----- | --- | --- | 3 |
| 1130 - 1140 | 15,000 | 3.8 | -10.7 | ---- | ----- | --- | --- | 3 |
| 1140 - 1150 | | 4.4 | -6.9 | ---- | ----- | --- | --- | 3 |
| 1150 - 1160 | | 9.8 | -13.6 | ---- | ----- | --- | --- | 5 |
| 1160 - 1170 | | 4.4 | -4.1 | ---- | ----- | --- | --- | 4 |
| 1170 - 1180 | 14,500 | 14.5 | ----- | ---- | ----- | --- | --- | 1 |
| 1180 - 1190 | | ---- | -4.7 | ---- | -8.7 | --- | 213 | 1 |
| 1190 - 1200 | | ---- | -5.0 | ---- | -5.5 | --- | 120 | 1 |
| 1200 - 1210 | 15,000 | 4.1 | -5.0 | ---- | ----- | --- | --- | 2 |
| 1210 - 1220 | | 8.2 | -6.6 | ---- | ----- | --- | --- | 5 |
| 1220 - 1230 | | 1.9 | -6.0 | ---- | ----- | --- | --- | 3 |
| 1230 - 1240 | | ---- | -11.0 | ---- | ----- | --- | --- | 2 |
| 1240 - 1250 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1250 - 1260 | | 9.8 | -8.5 | ---- | ----- | --- | --- | 4 |
| 1260 - 1270 | | 4.7 | -11.7 | ---- | ----- | --- | --- | 3 |
| 1270 - 1280 | 14,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1280 - 1290 | | ---- | -4.1 | ---- | ----- | --- | --- | 1 |
| 1290 - 1300 | | 1.9 | -5.7 | ---- | ----- | --- | --- | 4 |
| 1300 - 1310 | | 9.8 | -11.7 | ---- | ----- | --- | --- | 8 |

[a]Cloud entry.
[b]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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 348 - Traverse 3<br>Length of traverse 1358.6 sec | | | | | | | | |
| 1310 - 1320 | 14,500 | 15.1 | -10.4 | ---- | ----- | --- | --- | 13 |
| 1320 - 1330 | 15,000 | 9.8 | -5.4 | ---- | ----- | --- | --- | 3 |
| 1330 - 1340 | | 10.1 | ----- | ---- | ----- | --- | --- | 4 |
| [b]1340 - 1350 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 1350 - 1360 | | 10.1 | ----- | 16.5 | ----- | 308 | --- | 1 |
| Airplane 348 - Traverse 4<br>Length of traverse 375.0 sec | | | | | | | | |
| 0 - 10 | 15,000 | 2.9 | ----- | ---- | ----- | --- | --- | 3 |
| 10 - 20 | | 4.7 | -8.5 | ---- | ----- | --- | --- | 7 |
| [a]20 - 30 | | 2.3 | -9.4 | ---- | ----- | --- | --- | 6 |
| 30 - 40 | | 5.3 | -2.9 | ---- | ----- | --- | --- | 5 |
| 40 - 50 | | 9.1 | -15.8 | ---- | ----- | --- | --- | 10 |
| 50 - 60 | 14,500 | 5.0 | -14.3 | ---- | ----- | --- | --- | 7 |
| 60 - 70 | | 7.6 | -4.7 | ---- | ----- | --- | --- | 4 |
| 70 - 80 | 15,000 | 8.2 | -10.8 | ---- | ----- | --- | --- | 12 |
| 80 - 90 | | ---- | -9.1 | ---- | ----- | --- | --- | 1 |
| 90 - 100 | 14,500 | 9.6 | -9.4 | ---- | ----- | --- | --- | 7 |
| 100 - 110 | | 5.3 | -5.8 | ---- | ----- | --- | --- | 7 |
| 110 - 120 | 15,000 | 8.8 | -11.4 | ---- | ----- | --- | --- | 5 |
| 120 - 130 | | 7.9 | -12.6 | ---- | ----- | --- | --- | 6 |
| 130 - 140 | | 6.4 | -9.6 | ---- | ----- | --- | --- | 8 |
| 140 - 150 | | 5.3 | -9.6 | ---- | ----- | --- | --- | 7 |
| 150 - 160 | | 12.0 | -17.0 | ---- | ----- | --- | --- | 7 |
| 160 - 170 | | 11.1 | -7.0 | ---- | ----- | --- | --- | 4 |
| 170 - 180 | | 7.0 | -8.8 | ---- | ----- | --- | --- | 3 |
| 180 - 190 | 14,500 | 10.5 | -6.1 | ---- | ----- | --- | --- | 6 |
| 190 - 200 | 15,000 | 3.5 | -7.0 | ---- | ----- | --- | --- | 4 |
| 200 - 210 | | 10.2 | -21.3 | 23.3 | ----- | 343 | --- | 5 |
| 210 - 220 | | 3.2 | -7.3 | 9.5 | ----- | 110 | --- | 3 |
| 220 - 230 | | 5.0 | -4.4 | ---- | ----- | --- | --- | 3 |
| 230 - 240 | | 6.4 | -7.3 | ---- | ----- | --- | --- | 8 |
| 240 - 250 | | 12.3 | -9.1 | ---- | ----- | --- | --- | 7 |

[a]Cloud entry.
[b]Cloud exit.

NACA

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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 348 - Traverse 4<br>Length of traverse 375.0 sec | | | | | | | | |
| 250 - 260 | 15,000 | 5.6 | -10.5 | ---- | ----- | --- | --- | 10 |
| 260 - 270 | 14,500 | 7.6 | -11.4 | ---- | ----- | --- | --- | 9 |
| 270 - 280 | | 12.9 | -7.9 | ---- | ----- | --- | --- | 5 |
| 280 - 290 | 15,000 | 9.1 | -16.7 | ---- | ----- | --- | --- | 6 |
| 290 - 300 | 14,500 | 6.4 | -12.6 | ---- | ----- | --- | --- | 12 |
| 300 - 310 | | 5.6 | -9.1 | ---- | ----- | --- | --- | 6 |
| 310 - 320 | | 9.4 | -10.8 | ---- | ----- | --- | --- | 6 |
| 320 - 330 | 15,000 | 4.1 | -16.7 | ---- | ----- | --- | --- | 8 |
| 330 - 340 | | ---- | -7.0 | ---- | ----- | --- | --- | 2 |
| [b]340 - 350 | 14,500 | 2.3 | -4.4 | ---- | ----- | --- | --- | 3 |
| 350 - 360 | | 4.4 | ----- | ---- | ----- | --- | --- | 1 |
| 360 - 370 | 15,000 | 2.0 | -4.1 | 7.0 | ----- | 45 | --- | 5 |
| 370 - 380 | | 3.2 | -3.8 | ---- | ----- | --- | --- | 2 |
| Airplane 333 - Traverse 1<br>Length of traverse 459.8 sec | | | | | | | | |
| 0 - 80 | 10,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 80 - 90 | | ---- | ----- | ---- | -5.6 | --- | 107 | 1 |
| 90 - 100 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 100 - 110 | | 7.5 | -2.6 | ---- | ----- | --- | --- | 4 |
| 110 - 120 | | ---- | -4.4 | ---- | ----- | --- | --- | 3 |
| 120 - 130 | | 6.7 | ----- | ---- | ----- | --- | --- | 1 |
| 130 - 140 | | ---- | -3.4 | ---- | ----- | --- | --- | 3 |
| 140 - 150 | | ---- | -6.1 | ---- | ----- | --- | --- | 1 |
| 150 - 160 | | 7.9 | -3.2 | 1.8 | ----- | 173 | --- | 4 |
| 160 - 170 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]170 - 180 | | 4.6 | ----- | ---- | ----- | --- | --- | 1 |
| 180 - 190 | | 6.3 | -5.0 | ---- | ----- | --- | --- | 3 |
| 190 - 200 | | ---- | -3.3 | ---- | ----- | --- | --- | 1 |
| 200 - 210 | | 4.1 | -2.0 | ---- | -6.0 | --- | 68 | 2 |
| 210 - 230 | 9,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 230 - 240 | | 3.0 | -3.2 | 2.1 | ----- | 132 | --- | 2 |

[a]Cloud entry.
[b]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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 333 - Traverse 1<br>Length of traverse 459.8 sec | | | | | | | | |
| 240 - 250 | 9,500 | 3.7 | -1.8 | 7.7 | ----- | 79 | --- | 3 |
| 250 - 260 | | ---- | -3.5 | ---- | -4.4 | --- | 120 | 2 |
| 260 - 270 | | ---- | -3.4 | ---- | ----- | --- | --- | 1 |
| 270 - 280 | | 5.6 | -8.7 | ---- | ----- | --- | --- | 3 |
| 280 - 290 | | 4.9 | ----- | ---- | ----- | --- | --- | 1 |
| 290 - 330 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 330 - 340 | | ---- | -2.5 | ---- | ----- | --- | --- | 1 |
| 340 - 350 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]350 - 360 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 360 - 450 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 450 - 460 | | 4.1 | ----- | ---- | ----- | --- | --- | 1 |
| Airplane 333 - Traverse 2<br>Length of traverse 236.7 sec | | | | | | | | |
| [a]0 - 10 | 9,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 10 - 20 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 20 - 30 | | 31.7 | -4.0 | ---- | ----- | --- | --- | 4 |
| 30 - 40 | | 3.8 | ----- | ---- | ----- | --- | --- | 1 |
| 40 - 50 | | 2.9 | ----- | ---- | ----- | --- | --- | 1 |
| 50 - 60 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 60 - 70 | 10,000 | ---- | -3.2 | ---- | ----- | --- | --- | 1 |
| 70 - 80 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 80 - 90 | | 5.3 | -4.9 | ---- | ----- | --- | --- | 3 |
| [b]90 - 100 | | ---- | -2.4 | ---- | ----- | --- | --- | 1 |
| 100 - 110 | 9,500 | 6.3 | -5.6 | ---- | ----- | --- | --- | 4 |
| 110 - 120 | | 3.8 | -2.4 | ---- | -5.2 | --- | 104 | 4 |
| 120 - 130 | | ---- | -5.4 | ---- | ----- | --- | --- | 2 |
| 130 - 140 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]140 - 150 | | ---- | -4.0 | ---- | ----- | --- | --- | 2 |
| 150 - 160 | | 8.0 | -4.0 | ---- | -5.2 | --- | 129 | 3 |
| 160 - 170 | | 8.5 | -7.1 | ---- | ----- | --- | --- | 5 |
| 170 - 180 | | 4.5 | -5.6 | ---- | ----- | --- | --- | 4 |
| 180 - 190 | | 5.9 | ----- | ---- | ----- | --- | --- | 1 |

[a]Cloud entry.
[b]Cloud exit.

NACA

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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 333 - Traverse 2<br>Length of traverse 236.7 sec | | | | | | | | |
| 190 - 210 | 9,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 210 - 220 | | 3.6 | -8.7 | ---- | ----- | --- | --- | 2 |
| [b]220 - 230 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 230 - 240 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| Airplane 333 - Traverse 3<br>Length of traverse 75.7 sec | | | | | | | | |
| 0 - 80 | 10,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| Airplane 333 - Traverse 4<br>Length of traverse 405.2 sec | | | | | | | | |
| 0 - 10 | 10,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]10 - 20 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 20 - 180 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]180 - 190 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]190 - 200 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 200 - 410 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| Airplane 333 - Traverse 5<br>Length of traverse 367.5 sec | | | | | | | | |
| 0 - 150 | 10,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]150 - 160 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 160 - 260 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 260 - 270 | | 3.6 | -2.3 | ---- | ----- | --- | --- | 4 |
| 270 - 280 | | ---- | -2.3 | ---- | ----- | --- | --- | 3 |
| 280 - 290 | | ---- | -5.5 | ---- | ----- | --- | --- | 2 |
| 290 - 310 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]310 - 320 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 320 - 370 | | ---- | ----- | ---- | ----- | --- | --- | 0 |

[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 |
|---|---|---|---|---|---|---|---|---|
| September 5, 1947 - Flight 35 | | | | | | | | |
| Airplane 333 - Traverse 6<br>Length of traverse 175.0 sec | | | | | | | | |
| 0 - 30 | 10,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]30 - 40 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [a]40 - 50 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 50 - 100 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 100 - 110 | 9,500 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 110 - 160 | 10,000 | ---- | ----- | ---- | ----- | --- | --- | 0 |
| [b]160 - 170 | | ---- | ----- | ---- | ----- | --- | --- | 0 |
| 170 - 180 | | ---- | ----- | ---- | ----- | --- | --- | 0 |

[a]Cloud entry.
[b]Cloud exit.

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

| Date | Flight no. | Airplane no. | Assigned altitude (ft) | Traverse no. | Draft location from start of traverse (sec) | | Draft extent (ft) | Average draft velocity (fps) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Start | End | | |
| 9-4-47 | 33 | 356 | 20,000 | [a]1 | | | | |
| | | | | [a]2 | | | | |
| | | 348 | 15,000 | [a]1 | | | | |
| | | | | [a]2 | | | | |
| 9-5-47 | 34 | 348 | 20,000 | 1 | 50.1 | 60.1 | 3,539 | -12.0 |
| | | | | 2 | 24.2 | 73.6 | 16,904 | -13.2 |
| | | | | | 991.4 | 997.5 | 2,073 | 16.4 |
| | | | | | 1029.8 | 1052.4 | 8,134 | -19.9 |
| | | 353 | 15,000 | 1 | 83.3 | 91.0 | 2,512 | -18.6 |
| | | | | | 116.4 | 119.7 | 1,107 | -39.1 |
| | | | | | 199.0 | 208.0 | 3,080 | -14.2 |
| | | | | | 325.0 | 329.5 | 1,447 | 25.3 |
| | | | | | 347.0 | 352.8 | 1,865 | 25.4 |
| | | | | | 362.0 | 390.0 | 7,529 | 19.6 |
| | | | | 2 | 88.6 | 97.2 | 2,820 | 31.6 |
| | | | | 3 | 45.0 | 57.8 | 3,871 | -14.5 |
| | | | | | 351.0 | 363.0 | 3,780 | -25.8 |
| | | | | 4 | 178.8 | 191.0 | 3,851 | -13.4 |
| | | 333 | 10,000 | 1 | 249.3 | 258.0 | 2,310 | 12.9 |
| | | | | | 747.2 | 780.6 | 9,175 | 8.2 |
| | | | | | 1605.8 | 1628.2 | 6,797 | -12.9 |
| | 35 | 348 | 15,000 | 1 | 197.5 | 209.0 | 3,579 | 25.0 |
| | | | | | 487.0 | 513.5 | 8,264 | 15.7 |
| | | | | 2 | 86.5 | 98.8 | 3,828 | -22.1 |

[a]No draft velocities indicated by records.

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

| Date | Flight no. | Airplane no. | Assigned altitude (ft) | Traverse no. | Draft location from start of traverse (sec) | | Draft extent (ft) | Average draft velocity (fps) |
|---|---|---|---|---|---|---|---|---|
| | | | | | Start | End | | |
| 9-5-47 | 35 | 348 | 15,000 | 3 | 112.0 | 120.5 | 2,646 | 29.4 |
| | | | | | 127.0 | 145.5 | 5,981 | 23.9 |
| | | | | | 351.0 | 360.9 | 3,081 | 15.2 |
| | | | | | 600.0 | 639.5 | 13,085 | 13.5 |
| | | | | | 1118.0 | 1127.0 | 2,877 | -11.9 |
| | | 333 | 10,000 | 1 | 293.4 | 310.4 | 1,922 | -8.9 |
| | | | | 2 | 44.7 | 61.0 | 4,522 | 10.7 |
| | | | | | 89.6 | 112.0 | 6,007 | -8.4 |
| | | | | [a]3 | | | | |
| | | | | [a]4 | | | | |
| | | | | [a]5 | | | | |
| | | | | 6 | 73.3 | 105.4 | 8,940 | 5.5 |

[a]No draft velocities indicated by records.

INDEX


| Subject | Number |
|---|---|
| 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 September 4, 1947 to September 5, 1947 are presented.

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