|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| time[hr],after7/5/1976,00UTC | day | hour | dpdx[Pa/km] | dpdy[Pa/km] | u0[m/s] | v0[m/s] | dpdx\_m[Pa/km] | u0\_m[m/s] | v0\_m[m/s] |
| 0.0000 | 0.0000 | 0.0000 | -0.81743 | 0.42456 | -9.0393 | -7.5849 |  |  |  |
| 1.0000 | 0.0000 | 1.0000 | 0.52544 | 0.11659 | -7.5072 | -6.2993 |  |  |  |
| 2.0000 | 0.0000 | 2.0000 | 0.23345 | 0.65774 | -8.2733 | -6.9421 |  |  |  |
| 3.0000 | 0.0000 | 3.0000 | -0.87598 | 1.6234 | -7.5072 | -6.2993 |  |  |  |
| 4.0000 | 0.0000 | 4.0000 | 0.93415 | -0.09569 | -8.2733 | -6.9421 |  |  |  |
| 5.0000 | 0.0000 | 5.0000 | 1.5763 | 0.34977 | -7.1014 | -4.1000 |  |  |  |
| 6.0000 | 0.0000 | 6.0000 | 2.4523 | -1.2737 | -7.1014 | -4.1000 |  |  |  |
| 7.0000 | 0.0000 | 7.0000 | 1.2261 | -0.63684 | -7.1014 | -4.1000 |  |  |  |
| 8.0000 | 0.0000 | 8.0000 | 1.1676 | 0.56205 | -7.5830 | -1.3371 |  |  |  |
| 9.0000 | 0.0000 | 9.0000 | 0.64216 | 0.44546 | -6.5982 | 1.1634 |  |  |  |
| 10.000 | 0.0000 | 10.000 | 0.40872 | -0.21228 | -6.2354 | 3.6000 |  |  |  |
| 11.000 | 0.0000 | 11.000 | 0.52544 | 0.11659 | -2.5500 | 4.4167 |  |  |  |
| 12.000 | 0.0000 | 12.000 | 1.2843 | 0.89092 | -1.4023 | 3.8527 |  |  |  |
| 13.000 | 0.0000 | 13.000 | 0.11672 | 0.32887 | -0.79878 | 4.5301 |  |  |  |
| 14.000 | 0.0000 | 14.000 | 1.0509 | 0.23318 | 0.88561 | 5.0225 |  |  |  |
| 15.000 | 0.0000 | 15.000 | 0.11672 | 0.32887 | 2.7578 | 2.3140 |  |  |  |
| 16.000 | 0.0000 | 16.000 | -0.70071 | 0.75343 | 2.6847 | -1.5500 |  |  |  |
| 17.000 | 0.0000 | 17.000 | -1.2261 | 0.63684 | 1.9926 | -2.3747 |  |  |  |
| 18.000 | 0.0000 | 18.000 | -0.81743 | 0.42456 | 1.4023 | -3.8527 |  |  |  |
| 19.000 | 0.0000 | 19.000 | -0.29199 | 0.54115 | 1.4023 | -3.8527 |  |  |  |
| 20.000 | 0.0000 | 20.000 | -0.81743 | 0.42456 | 0.62513 | -3.5453 |  |  |  |
| 21.000 | 0.0000 | 21.000 | -0.11672 | -0.32887 | -1.3000 | -2.2517 |  |  |  |
| 22.000 | 0.0000 | 22.000 | 0.0000 | 0.0000 | -3.1177 | -1.8000 |  |  |  |
| 23.000 | 0.0000 | 23.000 | -0.11672 | -0.32887 | -5.1000 | 0 |  |  |  |
| 24.000 | 1.0000 | 0.0000 | 0.17527 | -0.87002 | -5.3562 | 1.9495 | -0.32108 | -7.1978 | -2.8177 |
| 25.000 | 1.0000 | 1.0000 | 0.17527 | -0.87002 | -5.6134 | 0.98979 | 0.35035 | -6.5603 | -2.6548 |
| 26.000 | 1.0000 | 2.0000 | 0.29199 | -0.54115 | -4.7924 | 1.7443 | 0.26272 | -6.5329 | -2.5989 |
| 27.000 | 1.0000 | 3.0000 | 2.2770 | -0.40365 | -5.3562 | 1.9495 | 0.70052 | -6.4317 | -2.1749 |
| 28.000 | 1.0000 | 4.0000 | 1.8683 | -0.19138 | -5.8261 | 2.1205 | 1.4012 | -7.0497 | -2.4108 |
| 29.000 | 1.0000 | 5.0000 | -0.11672 | -0.32887 | -4.7495 | 3.9853 | 0.72980 | -5.9254 | -0.057358 |
| 30.000 | 1.0000 | 6.0000 | -0.81743 | 0.42456 | -2.6354 | 3.1408 | 0.81743 | -4.8684 | -0.47961 |
| 31.000 | 1.0000 | 7.0000 | -0.52544 | -0.11659 | -1.4023 | 3.8527 | 0.35035 | -4.2518 | -0.12363 |
| 32.000 | 1.0000 | 8.0000 | 0.75888 | 0.77433 | 1.8000 | 3.1177 | 0.96324 | -2.8915 | 0.89030 |
| 33.000 | 1.0000 | 9.0000 | -0.70071 | 0.75343 | 0.71824 | 1.9734 | -0.029273 | -2.9400 | 1.5684 |
| 34.000 | 1.0000 | 10.000 | -0.87598 | 1.6234 | 1.5500 | 2.6847 | -0.23363 | -2.3427 | 3.1423 |
| 35.000 | 1.0000 | 11.000 | -0.99270 | 1.2946 | 1.9917 | 1.6712 | -0.23363 | -0.27914 | 3.0440 |
| 36.000 | 1.0000 | 12.000 | -1.8101 | 1.7191 | 4.0377 | 0.71196 | -0.26290 | 1.3177 | 2.2823 |
| 37.000 | 1.0000 | 13.000 | -2.8610 | 1.4860 | 6.2959 | -2.2915 | -1.3721 | 2.7486 | 1.1193 |
| 38.000 | 1.0000 | 14.000 | -1.8683 | 0.19138 | 1.8000 | -3.1177 | -0.40872 | 1.3428 | 0.95241 |
| 39.000 | 1.0000 | 15.000 | -2.1018 | -0.46636 | 2.8500 | -4.9363 | -0.99252 | 2.8039 | -1.3112 |
| 40.000 | 1.0000 | 16.000 | -0.52544 | -0.11659 | 2.1205 | -5.8261 | -0.61307 | 2.4026 | -3.6880 |
| 41.000 | 1.0000 | 17.000 | -0.35017 | -0.98661 | 2.4625 | -6.7658 | -0.78816 | 2.2276 | -4.5703 |
| 42.000 | 1.0000 | 18.000 | -1.1091 | -1.7609 | 2.1205 | -5.8261 | -0.96324 | 1.7614 | -4.8394 |
| 43.000 | 1.0000 | 19.000 | -0.11672 | -0.32887 | 2.5500 | -4.4167 | -0.20436 | 1.9761 | -4.1347 |
| 44.000 | 1.0000 | 20.000 | -0.11672 | -0.32887 | 0.88561 | -5.0225 | -0.46708 | 0.75537 | -4.2839 |
| 45.000 | 1.0000 | 21.000 | -1.3429 | 0.30797 | -0.79878 | -4.5301 | -0.72980 | -1.0494 | -3.3909 |
| 46.000 | 1.0000 | 22.000 | -0.11672 | -0.32887 | 0 | -4.1000 | -0.058361 | -1.5588 | -2.9500 |
| 47.000 | 1.0000 | 23.000 | -4.2621 | 0.26616 | 1.3000 | 2.2517 | -2.1894 | -1.9000 | 1.1258 |

Meteorological Information for IJmuiden, 7 and 8 May 1976 (answer to problem 1.13 in the lecture notes on Atmospheric Dynamics).

Observations of wind perpendicular to the coast (u0), wind parallel to the coast (v0), analysis of the pressure gradient perpendicular to the coast (dpdx) and pressure gradient parallel to the coast (dpdy), deduced from pressure observations at IJmuiden, Schiphol and Valkenburg.

**Last three columns**: average (over two days) daily cycle of pressure gradient perpendicular to coast, wind perpendicular to the coast and wind parallel to the coast