|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| time[hr]after7/5/197600UTC | 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 | 0.26366 | -7.8283 | -2.0490 |  |  |  |
| 1.0000 | 0.0000 | 1.0000 | 0.52544 | 0.12264 | -6.5015 | -1.7018 |  |  |  |
| 2.0000 | 0.0000 | 2.0000 | 0.23345 | 0.50894 | -7.1649 | -1.8754 |  |  |  |
| 3.0000 | 0.0000 | 3.0000 | -0.87598 | 1.1589 | -6.5015 | -1.7018 |  |  |  |
| 4.0000 | 0.0000 | 4.0000 | 0.93415 | -0.0091895 | -7.1649 | -1.8754 |  |  |  |
| 5.0000 | 0.0000 | 5.0000 | 1.5763 | 0.36792 | -3.5507 | 8.2000 |  |  |  |
| 6.0000 | 0.0000 | 6.0000 | 2.4523 | -0.79098 | -3.5507 | 8.2000 |  |  |  |
| 7.0000 | 0.0000 | 7.0000 | 1.2261 | -0.39549 | -3.5507 | 8.2000 |  |  |  |
| 8.0000 | 0.0000 | 8.0000 | 1.1676 | 0.49975 | -5.1083 | 7.2356 |  |  |  |
| 9.0000 | 0.0000 | 9.0000 | 0.64216 | 0.37711 | -5.4524 | 5.1325 |  |  |  |
| 10.000 | 0.0000 | 10.000 | 0.40872 | -0.13183 | -6.2354 | 3.6000 |  |  |  |
| 11.000 | 0.0000 | 11.000 | 0.52544 | 0.12264 | -2.2084 | 5.1000 |  |  |  |
| 12.000 | 0.0000 | 12.000 | 1.2843 | 0.75422 | -1.2144 | 4.0377 |  |  |  |
| 13.000 | 0.0000 | 13.000 | 0.11672 | 0.25447 | -0.69177 | 4.3226 |  |  |  |
| 14.000 | 0.0000 | 14.000 | 1.0509 | 0.24528 | 0.76696 | 3.9068 |  |  |  |
| 15.000 | 0.0000 | 15.000 | 0.11672 | 0.25447 | 2.3883 | 0.62513 |  |  |  |
| 16.000 | 0.0000 | 16.000 | -0.70071 | 0.51813 | 2.3250 | -2.6847 |  |  |  |
| 17.000 | 0.0000 | 17.000 | -1.2261 | 0.39549 | 1.7257 | -3.0529 |  |  |  |
| 18.000 | 0.0000 | 18.000 | -0.81743 | 0.26366 | 1.2144 | -4.0377 |  |  |  |
| 19.000 | 0.0000 | 19.000 | -0.29199 | 0.38630 | 1.2144 | -4.0377 |  |  |  |
| 20.000 | 0.0000 | 20.000 | -0.81743 | 0.26366 | 0.54138 | -3.3829 |  |  |  |
| 21.000 | 0.0000 | 21.000 | -0.11672 | -0.25447 | -1.1258 | -1.3000 |  |  |  |
| 22.000 | 0.0000 | 22.000 | 0.0000 | 0.0000 | -1.5588 | 3.6000 |  |  |  |
| 23.000 | 0.0000 | 23.000 | -0.11672 | -0.25447 | -3.8250 | 4.4167 |  |  |  |
| 24.000 | 1.0000 | 0.0000 | 0.17527 | -0.64077 | -4.8614 | 3.6639 | -0.32108 | -6.3448 | 0.80742 |
| 25.000 | 1.0000 | 1.0000 | 0.17527 | -0.64077 | -4.6386 | 4.3665 | 0.35035 | -5.5701 | 1.3324 |
| 26.000 | 1.0000 | 2.0000 | 0.29199 | -0.38630 | -4.3496 | 3.2782 | 0.26272 | -5.7573 | 0.70141 |
| 27.000 | 1.0000 | 3.0000 | 2.2770 | -0.15021 | -4.8614 | 3.6639 | 0.70052 | -5.6814 | 0.98107 |
| 28.000 | 1.0000 | 4.0000 | 1.8683 | -0.018379 | -5.2878 | 3.9853 | 1.4012 | -6.2263 | 1.0549 |
| 29.000 | 1.0000 | 5.0000 | -0.11672 | -0.25447 | -5.2878 | 2.1205 | 0.72980 | -4.4192 | 5.1603 |
| 30.000 | 1.0000 | 6.0000 | -0.81743 | 0.26366 | -3.3366 | 0.71196 | 0.81743 | -3.4436 | 4.4560 |
| 31.000 | 1.0000 | 7.0000 | -0.52544 | -0.12264 | -1.2144 | 4.0377 | 0.35035 | -2.3826 | 6.1189 |
| 32.000 | 1.0000 | 8.0000 | 0.75888 | 0.63158 | 1.5588 | 1.8000 | 0.96324 | -1.7747 | 4.5178 |
| 33.000 | 1.0000 | 9.0000 | -0.70071 | 0.51813 | 0.62202 | 1.3499 | -0.029273 | -2.4152 | 3.2412 |
| 34.000 | 1.0000 | 10.000 | -0.87598 | 1.1589 | 1.3423 | 1.5500 | -0.23363 | -2.4465 | 2.5750 |
| 35.000 | 1.0000 | 11.000 | -0.99270 | 0.90443 | 1.7249 | 0.45149 | -0.23363 | -0.24174 | 2.7757 |
| 36.000 | 1.0000 | 12.000 | -1.8101 | 1.1681 | 3.4968 | -1.4023 | -0.26290 | 1.1412 | 1.3177 |
| 37.000 | 1.0000 | 13.000 | -2.8610 | 0.92281 | 5.4524 | -5.1325 | -1.3721 | 2.3803 | -0.40496 |
| 38.000 | 1.0000 | 14.000 | -1.8683 | 0.018379 | 1.5588 | -3.6000 | -0.40872 | 1.1629 | 0.15341 |
| 39.000 | 1.0000 | 15.000 | -2.1018 | -0.49056 | 2.4682 | -5.7000 | -0.99252 | 2.4282 | -2.5374 |
| 40.000 | 1.0000 | 16.000 | -0.52544 | -0.12264 | 1.8364 | -6.1058 | -0.61307 | 2.0807 | -4.3952 |
| 41.000 | 1.0000 | 17.000 | -0.35017 | -0.76341 | 2.1326 | -7.0906 | -0.78816 | 1.9292 | -5.0718 |
| 42.000 | 1.0000 | 18.000 | -1.1091 | -1.3950 | 1.8364 | -6.1058 | -0.96324 | 1.5254 | -5.0718 |
| 43.000 | 1.0000 | 19.000 | -0.11672 | -0.25447 | 2.2084 | -5.1000 | -0.20436 | 1.7114 | -4.5689 |
| 44.000 | 1.0000 | 20.000 | -0.11672 | -0.25447 | 0.76696 | -4.7924 | -0.46708 | 0.65417 | -4.0877 |
| 45.000 | 1.0000 | 21.000 | -1.3429 | 0.14102 | -0.69177 | -3.5238 | -0.72980 | -0.90880 | -2.4119 |
| 46.000 | 1.0000 | 22.000 | -0.11672 | -0.25447 | -5.7689e-16 | -3.5507 | -0.058361 | -0.77942 | 0.024648 |
| 47.000 | 1.0000 | 23.000 | -4.2621 | -0.085883 | 1.1258 | 1.3000 | -2.1894 | -1.3496 | 2.8584 |

Meteorological Information for IJmuiden, 7 and 8 May 1976 (answer to problem 1.13 in the lecture notes on Atmospheric Dynamics – August 2016).

Observations of wind perpendicular to the coast (*u*0), wind parallel to the coast (*v*0), 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 parallelto the coast