

### Standard operating temperature profiles for De Bilt and Paramaribo stations

The ECC ozonesonde shall be working accurately under standard atmospheric conditions over De Bilt and Paramaribo to an altitude of 10 hPa (~31.5km). Figure 1 and 2 show the 25-75% temperature range for both stations. The corresponding data values are in Table 1. The ozone sonde shall be well-isolated to ensure that the sensing solution does not freeze during operation within these standard temperature ranges. On the other hand, the temperature of the sensing solution shall not exceed the boiling temperature at the lowest pressures. For situations with higher or lower temperatures, measures shall be proposed and preferably implemented to prevent the sensing solution from freezing and boiling.

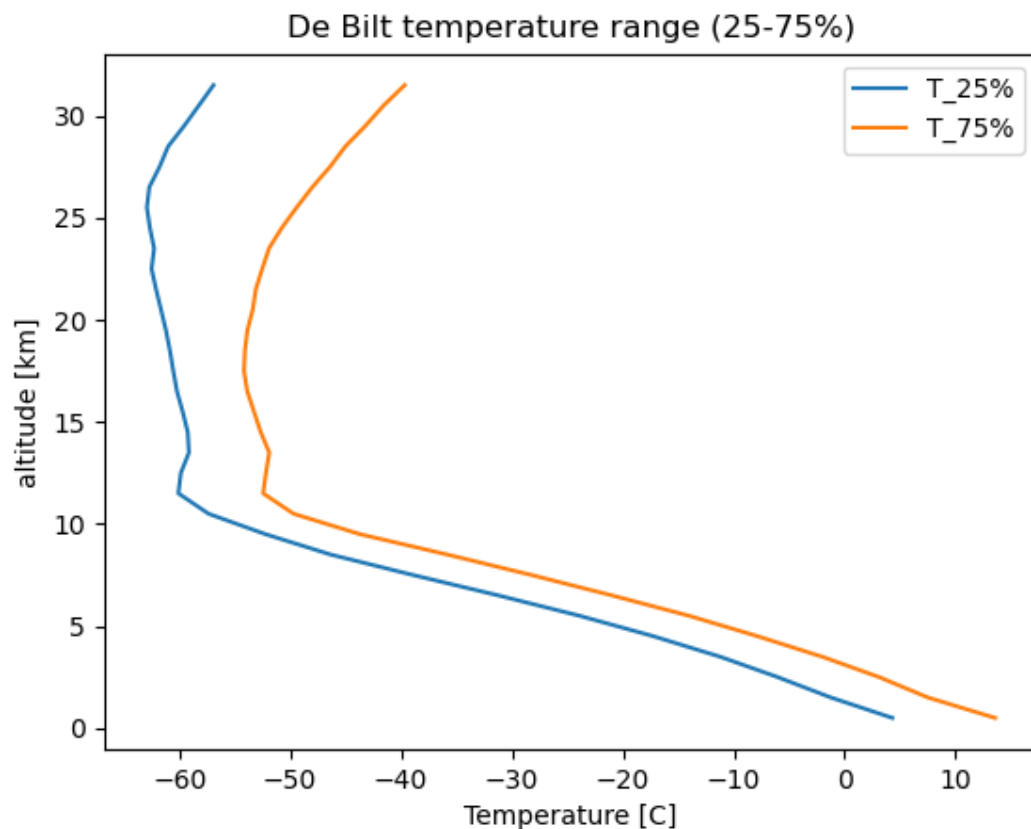


Figure 1. 25-75% Temperature range for De Bilt based on 891 profiles between 2006 and 2023.

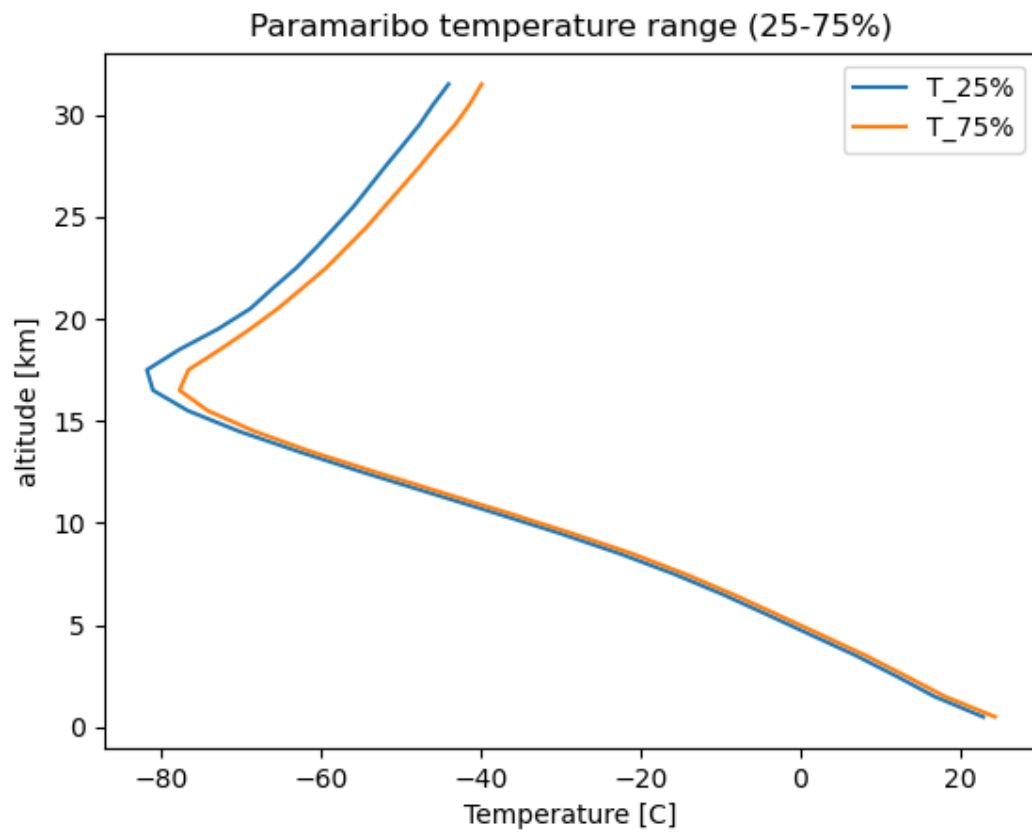


Figure 2. 25-75% Temperature range for Paramaribo based on 855 profiles between 2006 and 2023.

Table 1. Data values for the lines in Figures 1 and 2.

| altitude [km] | De Bilt   |           | Paramaribo |           |
|---------------|-----------|-----------|------------|-----------|
|               | T_25% [C] | T_75% [C] | T_25% [C]  | T_75% [C] |
| 0,5           | 4,3       | 13,6      | 23,0       | 24,4      |
| 1,5           | -1,3      | 7,5       | 16,8       | 18,1      |
| 2,5           | -6,0      | 3,1       | 12,0       | 13,3      |
| 3,5           | -11,2     | -2,0      | 7,0        | 8,3       |
| 4,5           | -17,2     | -7,9      | 1,5        | 2,8       |
| 5,5           | -23,9     | -14,0     | -4,1       | -2,8      |
| 6,5           | -31,2     | -21,0     | -9,7       | -8,4      |
| 7,5           | -38,9     | -28,2     | -15,8      | -14,4     |
| 8,5           | -46,3     | -35,8     | -22,6      | -21,0     |
| 9,5           | -52,2     | -43,7     | -30,1      | -28,6     |
| 10,5          | -57,3     | -49,7     | -38,3      | -36,6     |
| 11,5          | -60,1     | -52,4     | -46,6      | -45,0     |
| 12,5          | -59,9     | -52,2     | -54,9      | -53,2     |
| 13,5          | -59,1     | -51,9     | -62,8      | -61,3     |
| 14,5          | -59,2     | -52,6     | -70,3      | -68,4     |
| 15,5          | -59,7     | -53,3     | -76,7      | -74,2     |
| 16,5          | -60,2     | -53,9     | -81,0      | -77,7     |
| 17,5          | -60,5     | -54,2     | -81,8      | -76,6     |
| 18,5          | -60,8     | -54,1     | -77,7      | -72,6     |
| 19,5          | -61,2     | -53,9     | -72,9      | -68,9     |
| 20,5          | -61,6     | -53,4     | -68,8      | -65,4     |
| 21,5          | -62,1     | -53,1     | -66,0      | -62,3     |
| 22,5          | -62,5     | -52,5     | -63,1      | -59,3     |

|      |       |       |       |       |
|------|-------|-------|-------|-------|
| 23,5 | -62,3 | -51,9 | -60,6 | -56,8 |
| 24,5 | -62,6 | -50,8 | -58,2 | -54,3 |
| 25,5 | -62,9 | -49,4 | -55,9 | -52,0 |
| 26,5 | -62,7 | -48,0 | -53,9 | -49,8 |
| 27,5 | -61,8 | -46,4 | -51,9 | -47,6 |
| 28,5 | -61,0 | -45,0 | -49,8 | -45,5 |
| 29,5 | -59,6 | -43,2 | -47,7 | -43,2 |
| 30,5 | -58,2 | -41,6 | -45,9 | -41,4 |
| 31,5 | -56,9 | -39,7 | -44,0 | -39,9 |