

Table 1. Definition of the columns in the moving upper-air geometrical height level format ASCII files used for the ERA-CLIM data. Suffices .1/.2 added to flag values signify observation values obtained during ascent/descent of a kite or tethered balloon (see Table 5). n runs from 0 to 100.

| Column      | Parameter                    | Unit    | Type    |
|-------------|------------------------------|---------|---------|
| 1           | observation type             |         | integer |
| 2           | latitude                     | °       | float   |
| 3           | longitude                    | °       | float   |
| 4           | coordinate flag              |         | integer |
| 5           | year                         |         | integer |
| 6           | month                        |         | integer |
| 7           | day                          |         | integer |
| 8           | date flag                    |         | integer |
| 9           | hour                         | h (UTC) | integer |
| 10          | minutes                      | min     | float   |
| 11          | time flag                    |         | integer |
| 12+20*(n-1) | height level n (hn)          | m asl   | float   |
| 13+20*(n-1) | hn flag                      |         | integer |
| 14+20*(n-1) | hn pressure                  | hPa     | float   |
| 15+20*(n-1) | hn pressure flag             |         | integer |
| 16+20*(n-1) | hn temperature               | °C      | float   |
| 17+20*(n-1) | hn temperature flag          |         | integer |
| 18+20*(n-1) | hn wind direction            | °       | float   |
| 19+20*(n-1) | hn wind direction flag       |         | integer |
| 20+20*(n-1) | hn wind speed                | m/s     | float   |
| 21+20*(n-1) | hn wind speed flag           |         | integer |
| 22+20*(n-1) | hn u wind                    | m/s     | float   |
| 23+20*(n-1) | hn u wind flag               |         | integer |
| 24+20*(n-1) | hn v wind                    | m/s     | float   |
| 25+20*(n-1) | hn v wind flag               |         | integer |
| 26+20*(n-1) | hn relative humidity         | %       | float   |
| 27+20*(n-1) | hn relative humidity flag    |         | integer |
| 28+20*(n-1) | hn dew point difference      | K       | float   |
| 29+20*(n-1) | hn dew point difference flag |         | integer |
| 30+20*(n-1) | hn specific humidity         | g/kg    | float   |
| 31+20*(n-1) | hn specific humidity flag    | °       | integer |

Table 2. Definition of the columns in the moving upper-air pressure level format ASCII files used for the ERA-CLIM data. Suffices .1/.2 added to flag values signify observation values obtained during ascent/descent of a kite or tethered balloon (see Table 5). n runs from 0 to 50.

| Column      | Parameter                    | Unit    | Type    |
|-------------|------------------------------|---------|---------|
| 1           | observation type             |         | integer |
| 2           | latitude                     | °       | float   |
| 3           | longitude                    | °       | float   |
| 4           | coordinate flag              |         | integer |
| 5           | year                         |         | integer |
| 6           | month                        |         | integer |
| 7           | day                          |         | integer |
| 8           | date flag                    |         | integer |
| 9           | hour                         | h (UTC) | integer |
| 10          | minutes                      | min     | float   |
| 11          | time flag                    |         | integer |
| 12+20*(n-1) | pressure level n (pn)        | hPa     | float   |
| 13+20*(n-1) | pn flag                      |         | integer |
| 14+20*(n-1) | pn geopotential height       | gpm     | float   |
| 15+20*(n-1) | pn geopotential height flag  |         | integer |
| 16+20*(n-1) | pn temperature               | °C      | float   |
| 17+20*(n-1) | pn temperature flag          |         | integer |
| 18+20*(n-1) | pn wind direction            | °       | float   |
| 19+20*(n-1) | pn wind direction flag       |         | integer |
| 20+20*(n-1) | pn wind speed                | m/s     | float   |
| 21+20*(n-1) | pn wind speed flag           |         | integer |
| 22+20*(n-1) | pn u wind                    | m/s     | float   |
| 23+20*(n-1) | pn u wind flag               |         | integer |
| 24+20*(n-1) | pn v wind                    | m/s     | float   |
| 25+20*(n-1) | pn v wind flag               |         | integer |
| 26+20*(n-1) | pn relative humidity         | %       | float   |
| 27+20*(n-1) | pn relative humidity flag    |         | integer |
| 28+20*(n-1) | pn dew point difference      | K       | float   |
| 29+20*(n-1) | pn dew point difference flag |         | integer |
| 30+20*(n-1) | pn specific humidity         | g/kg    | float   |
| 31+20*(n-1) | pn specific humidity flag    |         | integer |

Table 3. Definition of the columns in the fixed station upper-air geometrical height level format ASCII files used for the ERA-CLIM data. Suffices .1/.2 added to flag values signify observation values obtained during ascent/descent of a kite or captive balloon (see Table 5). n runs from 0 to 100.

| Column      | Parameter                    | Unit    | Type    |
|-------------|------------------------------|---------|---------|
| 1           | observation type             |         | integer |
| 2           | year                         |         | integer |
| 3           | month                        |         | integer |
| 4           | day                          |         | integer |
| 5           | date flag                    |         | integer |
| 6           | hour                         | h (UTC) | integer |
| 7           | minutes                      | min     | float   |
| 8           | time flag                    |         | integer |
| 9+20*(n-1)  | height level n (hn)          | m asl   | float   |
| 10+20*(n-1) | hn flag                      |         | integer |
| 11+20*(n-1) | hn pressure                  | hPa     | float   |
| 12+20*(n-1) | hn pressure flag             |         | integer |
| 13+20*(n-1) | hn temperature               | °C      | float   |
| 14+20*(n-1) | hn temperature flag          |         | integer |
| 15+20*(n-1) | hn wind direction            | °       | float   |
| 16+20*(n-1) | hn wind direction flag       |         | integer |
| 17+20*(n-1) | hn wind speed                | m/s     | float   |
| 18+20*(n-1) | hn wind speed flag           |         | integer |
| 19+20*(n-1) | hn u wind                    | m/s     | float   |
| 20+20*(n-1) | hn u wind flag               |         | integer |
| 21+20*(n-1) | hn v wind                    | m/s     | float   |
| 22+20*(n-1) | hn v wind flag               |         | integer |
| 23+20*(n-1) | hn relative humidity         | %       | float   |
| 24+20*(n-1) | hn relative humidity flag    |         | integer |
| 25+20*(n-1) | hn dew point difference      | K       | float   |
| 26+20*(n-1) | hn dew point difference flag |         | integer |
| 27+20*(n-1) | hn specific humidity         | g/kg    | float   |
| 28+20*(n-1) | hn specific humidity flag    |         | integer |

Table 4. Definition of the columns in the fixed station upper-air pressure level format ASCII files used for the ERA-CLIM data. Suffices .1/.2 added to flag values signify observation values obtained during ascent/descent of a kite or captive balloon (see Table 5). n runs from 0 to 50.

| Column      | Parameter                    | Unit    | Type    |
|-------------|------------------------------|---------|---------|
| 1           | observation type             |         | integer |
| 2           | year                         |         | integer |
| 3           | month                        |         | integer |
| 4           | day                          |         | integer |
| 5           | date flag                    |         | integer |
| 6           | hour                         | h (UTC) | integer |
| 7           | minutes                      | min     | float   |
| 8           | time flag                    |         | integer |
| 9+20*(n-1)  | pressure level n (pn)        | hPa     | float   |
| 10+20*(n-1) | pn flag                      |         | integer |
| 11+20*(n-1) | pn geopotential height       | gpm     | float   |
| 12+20*(n-1) | pn geopotential height flag  |         | integer |
| 13+20*(n-1) | pn temperature               | °C      | float   |
| 14+20*(n-1) | pn temperature flag          |         | integer |
| 15+20*(n-1) | pn wind direction            | °       | float   |
| 16+20*(n-1) | pn wind direction flag       |         | integer |
| 17+20*(n-1) | pn wind speed                | m/s     | float   |
| 18+20*(n-1) | pn wind speed flag           |         | integer |
| 19+20*(n-1) | pn u wind                    | m/s     | float   |
| 20+20*(n-1) | pn u wind flag               |         | integer |
| 21+20*(n-1) | pn v wind                    | m/s     | float   |
| 22+20*(n-1) | pn v wind flag               |         | integer |
| 23+20*(n-1) | pn relative humidity         | %       | float   |
| 24+20*(n-1) | pn relative humidity flag    |         | integer |
| 25+20*(n-1) | pn dew point difference      | K       | float   |
| 26+20*(n-1) | pn dew point difference flag |         | integer |
| 27+20*(n-1) | pn specific humidity         | g/kg    | float   |
| 28+20*(n-1) | pn specific humidity flag    |         | integer |

Table 5. Meaning of flag values used in the upper-air data files.

| Flag Value or Suffix | Meaning  |
|----------------------|--|
| -999                 | default value  |
| 1111                 | value linearly interpolated  |
| 2222                 | value suspicious   |
| 3333                 | value linearly interpolated and suspicious   |
| 4444                 | value implausible  |
| 5555                 | value linearly interpolated and implausible  |
| 6666                 | value corrected according to errata  |
| 7777                 | value illegible  |
| 8888                 | launch time has been used for upper levels   |
| 9999                 | observation time is mean of observation time on neighbouring levels or time value for last level below with given time |
| .1                   | value from ascent  |
| .2                   | value from descent   |

Table 6. Numbers used to specify observational platform ("data type") in the upper-air data files.

| Number | Type                |
|--------|---------------------|
| 1      | airplane            |
| 2      | kite                |
| 3      | pilot balloon       |
| 4      | radiosonde          |
| 5      | registering balloon |
| 6      | captive balloon     |
| 7      | manned balloon      |