

UAH Ceilometer Data Formats

clo?????????.dat Files

```
18:55:41 08/20/2001
40 01800 03300 ///// 00000800
100 N 99 +36 110 0 +4 203 LF7LN1 180
000 525 490 400 335 314 290 276 272 256 232 213 202 187 187 178 160
016 164 160 145 131 140 106 111 81 76 74 62 59 63 63 29 16
032 42 -1 18 13 14 -11 -6 26 17 9 -13 -26 -5 -1 -10 -9
048 1 -11 -4 -3 6 -20 -8 24 7 18 -12 7 -19 5 20 3
064 30 -24 -30 10 5 17 -24 6 -11 -2 11 -18 18 -8 7 -6
080 -4 18 -6 -10 16 -2 37 -15 4 8 19 18 0 -4 -18 -12
096 22 -2 15 0 6 -5 -23 -23 17 1 12 8 9 -5 -10 20
112 5 2 13 -35 11 4 1 -3 21 -13 -3 18 23 8 -29 19
128 14 -32 21 8 18 26 -9 -15 0 -9 -39 7 -26 5 -9 -3
144 11 -11 19 -5 10 -8 -2 0 6 23 11 6 25 -7 -21 -8
160 -11 -14 12 3 -12 -22 -19 18 0 7 15 11 -15 7 4 -9
176 -25 0 -24 -21 19 -1 -7 8 -10 1 12 0 -1 2 -6 6
192 12 5 -13 12 -32 6 13 23 0 -15 14 4 0 -20 -2 -11
208 -1 -3 6 -29 2 2 -1 -18 23 -8 -30 -11 11 0 -2 -28
224 6 -3 32 -1 10 16 4 18 37 19 17 8 15 -10 13 0
240 9 7 -5 -3 19 -22 4 8 15 -17 -20 0 0 0 0 0
$
```

The ceilometer is vertically pointing. A measurement is made every 15 seconds. Gate spacing is 30 m.

Line 1:

HH:MM:SS MM/DD/YYYY

Line 2:

Example: 30 01230 12340 23450 FEDCBA98-J

where

3	First digit of line: Status of detection as follows:
0	No significant backscatter
1	One cloud base detected
2	Two cloud bases detected
3	Three cloud bases detected
4	Full obscuration determined but no cloud base detected
5	Some obscuration detected but determined to be transparent
0	Second digit of line: Warnings and Alarm information as follows:
	0 Self-check OK
	W At least one Warning active, no Alarms
	A At least one Alarm active
01230	If Detection Status is 1, 2 or 3: Lowest cloud base height
	If Detection Status is 4: Vertical Visibility as calculated
	If Detection Status is 0 or 5: /////
12340	If Detection Status is 2 or 3: Second lowest cloud base height
	If Detection Status is 4: Highest signal detected
	If Detection Status is 0, 1 or 5: /////

Multiplied by scaling factor times 104. At scaling factor 100
the SUM range 0 ... 999 corresponds to integrated backscatter
0 ... 0.0999 srad-l

Line 4-16:

The first field is height of the first gate reported on that line divided by
100. The next 16 fields are data at successive gates.

The data are range and sensitivity normalized backscatter, units
(10000·srad·km)⁻¹

Line 17:

\$ or blank line indicates end of record

Ceilometer Description

The ceilometer is a pulsed laser that operates at 0.905 um. The beamwidth is 1.06
mrad. The range is from 0 to 15 km, vertical resolution is 10 m and time resolution is
15 s.