

MATERHORN Experiment of May 2013

Date: 5/11/2013 ^{UTC} 5/12/2013 UTC

IOP# 4

GPS coordinates, lat: 40.096 °N, long: 113.240 °W, elevation: 1343 m MSL

Sonde serial number: X4124143, Kestrel serial number: 538705, balloon vol: 3 m³

Operators: Whiteman, Charland, Lehner, Blaylock

File name: 1003

Ascent number: 1 Start ascent (^{UTC}LT): ~~12:31~~ ⁰⁰³¹ Sonde p₀: 871.2 mb

Kestrel: p₀ 869.9 mb, T₀ 26.3 °C, RH₀ 80 %, ws₀ 3.0 m/s, wd₀ 0 true

Height attained (m AGL) 209 at 12:37 LT ^{UTC}

Remarks: Sky condition, battery level, etc.

Cirrus clouds 3/8 7.9

Cumulus wis

Ascent number: 2 Start ascent (^{UTC}LT): ~~12:48~~ ⁰⁰⁴⁸ Sonde p₀: 870.9 mb

Kestrel: p₀ 869.1 mb, T₀ 26.3 °C, RH₀ 82 %, ws₀ 1.5 m/s, wd₀ 0 true

Height attained (m AGL) 300 at 12:55 LT ^{UTC}

Remarks: Sky condition, battery level, etc.

7.6

Ascent number: 3 Start ascent (^{UTC}LT): 01:12 ⁰⁰⁴⁸ Sonde p₀: 870.7 mb

Kestrel: p₀ 869.8 mb, T₀ 25.7 °C, RH₀ 75 %, ws₀ 1.6 m/s, wd₀ 0 true

Height attained (m AGL) 203 at 01:19 LT ^{UTC}

Remarks: Sky condition, battery level, etc.

7.3

Ascent number: 4 Start ascent (^{UTC}LT): 01:30 ⁰⁰⁴⁸ Sonde p₀: 870.7 mb

Kestrel: p₀ 869.6 mb, T₀ 26.2 °C, RH₀ 14.7 %, ws₀ 0.0 m/s, wd₀ 0 true

Height attained (m AGL) 205 at 01:36 LT ^{UTC}

Remarks: Sky condition, battery level, etc.

7.2

MATERHORN Experiment of May 2013

Ascent number: 5 Start ascent (\overline{LT}): 0142^{UTC} Sonde p₀: 870.7 mb
Kestrel: p₀ 869.5 mb, T₀ 22.2 °C, RH₀ 12.7 %, ws₀ 1.3 m/s, wd₀ 270 true
Height attained (m AGL) 212 at 0149 \overline{LT} ^{UTC}

Remarks: Sky condition, battery level, etc.

File: 1004
shadow arrival A 0135

Ascent number: 6 Start ascent (\overline{LT}): 0200^{UTC} Sonde p₀: 870.5 mb
Kestrel: p₀ 869.7 mb, T₀ 18.9 °C, RH₀ 18.0 %, ws₀ 1.5 m/s, wd₀ 270 true
Height attained (m AGL) 207 at 0207 \overline{LT} ^{UTC}

Remarks: Sky condition, battery level, etc.

File: 1005, changed battery, filled helium.
1/8 clouds (Ac)

Ascent number: 7 Start ascent (\overline{LT}): 0214^{UTC} Sonde p₀: 870.7 mb
Kestrel: p₀ 869.9 mb, T₀ 17.9 °C, RH₀ 19.3 %, ws₀ 1.2 m/s, wd₀ 275 true
Height attained (m AGL) 203 at 0220 \overline{LT} ^{UTC}

Remarks: Sky condition, battery level, etc.

79

Ascent number: 8 Start ascent (\overline{LT}): 0228^{UTC} Sonde p₀: 870.8 mb
Kestrel: p₀ 869.8 mb, T₀ 17.7 °C, RH₀ 18.5 %, ws₀ 0.8 m/s, wd₀ 275 true
Height attained (m AGL) 205 at 0235 \overline{LT} ^{UTC}

Remarks: Sky condition, battery level, etc.

76

Ascent number: 9 Start ascent (\overline{LT}): 0244^{UTC} Sonde p₀: 870.8 mb
Kestrel: p₀ 869.9 mb, T₀ 17.6 °C, RH₀ 17.0 %, ws₀ 1.0 m/s, wd₀ 275 true
Height attained (m AGL) 207 at 0250 \overline{LT} ^{UTC}

Remarks: Sky condition, battery level, etc.

75

MATERHORN Experiment of May 2013

Ascent number: 10 Start ascent (^{UTC}LT): 0257 Sonde p₀: 870.8 mb
Kestrel: p₀ 869.8 mb, T₀ 15.9 °C, RH₀ 19.8 %, ws₀ 1.3 m/s, wd₀ 275 true
Height attained (m AGL) 204 at 0304 ^{UTC}LT
Remarks: Sky condition, battery level, etc.

Ascent number: 11 Start ascent (^{UTC}LT): 0320 Sonde p₀: 870.9 mb
Kestrel: p₀ 870.1 mb, T₀ 17.8 °C, RH₀ 17.8 %, ws₀ 1.2 m/s, wd₀ 275 true
Height attained (m AGL) 207 at 0328 ^{UTC}LT
Remarks: Sky condition, battery level, etc.

^{6.9}
changed to 5 m² balloon, line-climber attached to line

~~Ascent number: _____ Start ascent (LT): _____ Sonde p₀: _____ mb
Kestrel: p₀ _____ mb, T₀ _____ °C, RH₀ _____ %, ws₀ _____ m/s, wd₀ _____ true
Height attained (m AGL) _____ at _____ LT
Remarks: Sky condition, battery level, etc.~~

Ascent number: 12 Start ascent (^{UTC}LT): 0341 Sonde p₀: 871.1 mb
Kestrel: p₀ 870.1 mb, T₀ 16.9 °C, RH₀ 17.8 %, ws₀ 1.5 m/s, wd₀ 270 true
Height attained (m AGL) 207 at 0348 ^{UTC}LT
Remarks: Sky condition, battery level, etc.

File 1006, changed battery, line-climber

Ascent number: 13 Start ascent (^{UTC}LT): 0408 Sonde p₀: 871.1 mb
Kestrel: p₀ 870.1 mb, T₀ 16.8 °C, RH₀ 18.1 %, ws₀ 2.0 m/s, wd₀ 275 true
Height attained (m AGL) 208 at 0414 ^{UTC}LT
Remarks: Sky condition, battery level, etc.

^{7.6}

MATERHORN Experiment of May 2013

Ascent number: 14 Start ascent (\overleftarrow{LT}): 4:28^{UTC} Sonde p₀: 871.4 mb
Kestrel: p₀ 870.0 mb, T₀ 16.0 °C, RH₀ 20.0 %, ws₀ 2.1 m/s, wd₀ 270 true
Height attained (m AGL) 211 at 4:36 \overleftarrow{LT} ^{UTC}
Remarks: Sky condition, battery level, etc.

7.3

Ascent number: 15 Start ascent (\overleftarrow{LT}): 4:45^{UTC} Sonde p₀: 871.2 mb
Kestrel: p₀ 870.4 mb, T₀ 16.6 °C, RH₀ 17.9 %, ws₀ 1.5 m/s, wd₀ 270 true
Height attained (m AGL) 207 at 4:51 \overleftarrow{LT} ^{UTC}
Remarks: Sky condition, battery level, etc.

7.3

Ascent number: 16 Start ascent (\overleftarrow{LT}): 5:01^{UTC} Sonde p₀: 871.3 mb
Kestrel: p₀ 870.2 mb, T₀ 15.3 °C, RH₀ 21.3 %, ws₀ 1.6 m/s, wd₀ 270 true
Height attained (m AGL) 204 at 5:07 \overleftarrow{LT} ^{UTC}
Remarks: Sky condition, battery level, etc.

7.1

Ascent number: 17 Start ascent (\overleftarrow{LT}): 5:30^{UTC} Sonde p₀: 871.4 mb
Kestrel: p₀ 870.5 mb, T₀ 17.3 °C, RH₀ 17.9 %, ws₀ 1.3 m/s, wd₀ 270 true
Height attained (m AGL) 206 at 5:36 \overleftarrow{LT} ^{UTC}
Remarks: Sky condition, battery level, etc.

6.9

Ascent number: 18 Start ascent (\overleftarrow{LT}): 6:00^{UTC} Sonde p₀: 871.4 mb
Kestrel: p₀ 870.5 mb, T₀ 16.4 °C, RH₀ 18.3 %, ws₀ 1.3 m/s, wd₀ 270 true
Height attained (m AGL) 203 at 6:07 \overleftarrow{LT} ^{UTC}
Remarks: Sky condition, battery level, etc.

6.8

MATERHORN Experiment of May 2013

Ascent number: 19 Start ascent (\overleftarrow{T}): ^{UTC} 6:30 Sonde p₀: 871.6 mb
Kestrel: p₀ 870.7 mb, T₀ 18.0 °C, RH₀ 16.3 %, ws₀ 1.6 m/s, wd₀ 270 true
Height attained (m AGL) 212 at 6:36 \overleftarrow{T} UTC
Remarks: Sky condition, battery level, etc.

6.6

Ascent number: 20 Start ascent (\overleftarrow{T}): ^{UTC} 7:00 Sonde p₀: 871.8 mb
Kestrel: p₀ 870.9 mb, T₀ 16.6 °C, RH₀ 19.4 %, ws₀ 1.0 m/s, wd₀ 160 true
Height attained (m AGL) 208 at 7:06 \overleftarrow{T} UTC
Remarks: Sky condition, battery level, etc.

changed battery, wind shift at surface to southerly

Ascent number: 21 Start ascent (\overleftarrow{T}): ^{UTC} 7:26 Sonde p₀: 871.9 mb
Kestrel: p₀ 870.9 mb, T₀ 15.5 °C, RH₀ 22.1 %, ws₀ 1.1 m/s, wd₀ 270 true
Height attained (m AGL) 204 at 7:32 \overleftarrow{T} UTC
Remarks: Sky condition, battery level, etc.

7.6 v

Ascent number: 22 Start ascent (\overleftarrow{T}): ^{UTC} 7:56 Sonde p₀: 871.8 mb
Kestrel: p₀ 870.8 mb, T₀ 10.1 °C, RH₀ 33.6 %, ws₀ 1.5 m/s, wd₀ 310 true
Height attained (m AGL) 207 at 8:03 \overleftarrow{T} UTC
Remarks: Sky condition, battery level, etc.

Ascent number: 23 Start ascent (\overleftarrow{T}): ^{UTC} 0830 Sonde p₀: 871.7 mb
Kestrel: p₀ 870.9 mb, T₀ 10.4 °C, RH₀ 31.7 %, ws₀ 0.5 m/s, wd₀ 40 true
Height attained (m AGL) 211 at 0838 \overleftarrow{T} UTC
Remarks: Sky condition, battery level, etc.

IOP4 5/9

MATERHORN Experiment of May 2013

Ascent number: 24 Start ascent (^{UTC}LT): 0901 Sonde p₀: 871.8 mb
Kestrel: p₀ 870.8 mb, T₀ 13.2 °C, RH₀ 27 %, ws₀ 0.4 m/s, wd₀ 210 true
Height attained (m AGL) 404 at 913 ^{UTC}LT
Remarks: Sky condition, battery level, etc.

Ascent number: 25 Start ascent (^{UTC}LT): 0930 Sonde p₀: 871.6 mb
Kestrel: p₀ 870.7 mb, T₀ 12.4 °C, RH₀ 28.3 %, ws₀ 0.6 m/s, wd₀ 220 true
Height attained (m AGL) 206 at 0937 ^{UTC}LT
Remarks: Sky condition, battery level, etc.
File 1008, changed battery

Ascent number: 26 Start ascent (^{UTC}LT): 1000 Sonde p₀: 871.5 mb
Kestrel: p₀ 870.6 mb, T₀ 11.7 °C, RH₀ 28.8 %, ws₀ 0.9 m/s, wd₀ 225 true
Height attained (m AGL) 207 at 1007 ^{UTC}LT
Remarks: Sky condition, battery level, etc.

Ascent number: 27 Start ascent (^{UTC}LT): 1029 Sonde p₀: 871.6 mb
Kestrel: p₀ 870.7 mb, T₀ 10.8 °C, RH₀ 30.5 %, ws₀ 0.0 m/s, wd₀ 200 true
Height attained (m AGL) 405 at 1043 ^{UTC}LT
Remarks: Sky condition, battery level, etc.

Ascent number: 28 Start ascent (^{UTC}LT): 1057 Sonde p₀: 871.8 mb
Kestrel: p₀ 870.8 mb, T₀ 8.0 °C, RH₀ 37.8 %, ws₀ 0.5 m/s, wd₀ 0 true
Height attained (m AGL) 206 at 1105 ^{UTC}LT
Remarks: Sky condition, battery level, etc.

MATERHORN Experiment of May 2013

Ascent number: 29 Start ascent (\overleftarrow{T}): ^{UTC} 1129 Sonde p₀: 871.5 mb
Kestrel: p₀ 871.0 mb, T₀ 9.6 °C, RH₀ 34.4 %, ws₀ 0.6 m/s, wd₀ 200 true
Height attained (m AGL) 205 at 1137 \overleftarrow{T} UTC
Remarks: Sky condition, battery level, etc.

Ascent number: 30 Start ascent (\overleftarrow{T}): ^{UTC} 1158 Sonde p₀: 871.5 mb
Kestrel: p₀ 870.4 mb, T₀ 8.6 °C, RH₀ 34.9 %, ws₀ 1.6 m/s, wd₀ 250 true
Height attained (m AGL) 0107 at 1211 \overleftarrow{T} UTC
Remarks: Sky condition, battery level, etc.

File loop, changed battery
at 2:10 to N

Ascent number: 31 Start ascent (\overleftarrow{T}): ^{UTC} 1229 Sonde p₀: 871.7 mb
Kestrel: p₀ 870.9 mb, T₀ 6.8 °C, RH₀ 41.3 %, ws₀ 1.2 m/s, wd₀ 0 true
Height attained (m AGL) 207 at 1235 \overleftarrow{T} UTC
Remarks: Sky condition, battery level, etc.

~ sunrise

Ascent number: 32 Start ascent (\overleftarrow{T}): ^{UTC} 1244 Sonde p₀: 871.8 mb
Kestrel: p₀ 870.9 mb, T₀ 8.0 °C, RH₀ 40.8 %, ws₀ 1.2 m/s, wd₀ 0 true
Height attained (m AGL) 205 at 1250 \overleftarrow{T} UTC
Remarks: Sky condition, battery level, etc.

Ascent number: 33 Start ascent (\overleftarrow{T}): ^{UTC} 1259 Sonde p₀: 871.9 mb
Kestrel: p₀ 870.9 mb, T₀ 10.0 °C, RH₀ 38.4 %, ws₀ 0.6 m/s, wd₀ 330 true
Height attained (m AGL) 401 at 0112 \overleftarrow{T} UTC
Remarks: Sky condition, battery level, etc.

JOP4 7/9

MATERHORN Experiment of May 2013

Ascent number: 34 Start ascent (\overline{LT})^{UTC}: 0123 Sonde p₀: 871.7 mb
Kestrel: p₀ 870.5 mb, T₀ 13.8 °C, RH₀ 28.5 %, ws₀ 1.0 m/s, wd₀ 220 true
Height attained (m AGL) 206 at 0130 \overline{LT} ^{UTC}
Remarks: Sky condition, battery level, etc.

Ascent number: 35 Start ascent (\overline{LT})^{UTC}: 0141 Sonde p₀: 872.0 mb
Kestrel: p₀ 871.0 mb, T₀ 20.0 °C, RH₀ 21.4 %, ws₀ 0.9 m/s, wd₀ 200 true
Height attained (m AGL) 203 at 0147 \overline{LT} ^{UTC}
Remarks: Sky condition, battery level, etc.
temp decrease after starting ascent felt at the site (AC)

Ascent number: 36 Start ascent (\overline{LT})^{UTC}: 0158 Sonde p₀: 872.2 mb
Kestrel: p₀ 871 mb, T₀ 13.0 °C, RH₀ 31.0 %, ws₀ 1.6 m/s, wd₀ 80 true
Height attained (m AGL) 211 at 0204 \overline{LT} ^{UTC}
Remarks: Sky condition, battery level, etc.
G $\frac{4}{8}$

Ascent number: 37 Start ascent (\overline{LT})^{UTC}: 0217 Sonde p₀: 872.3 mb
Kestrel: p₀ 870.3 mb, T₀ 14.1 °C, RH₀ 27.2 %, ws₀ 1.6 m/s, wd₀ 60 true
Height attained (m AGL) 203 at 0224 \overline{LT} ^{UTC}
Remarks: Sky condition, battery level, etc.
File: 1010, changed battery

Ascent number: 38 Start ascent (\overline{LT})^{UTC}: 0232 Sonde p₀: 872.5 mb
Kestrel: p₀ 871.0 mb, T₀ 15.5 °C, RH₀ 21.6 %, ws₀ 1.0 m/s, wd₀ 80 true
Height attained (m AGL) 205 at 0238 \overline{LT} ^{UTC}
Remarks: Sky condition, battery level, etc.

JOP4 8/9

MATERHORN Experiment of May 2013

Ascent number: 39 Start ascent (LT): 2:44 ^{UTC} Sonde p₀: 872.5 mb
Kestrel: p₀ 870.9 mb, T₀ 18.4 °C, RH₀ 21.9 %, ws₀ 0.6 m/s, wd₀ 30 true
Height attained (m AGL) 200 at 2:52 LT ^{UTC}
Remarks: Sky condition, battery level, etc.

3/10 ci, MSTLY E

Ascent number: 40 Start ascent (LT): 2:58 ^{UTC} Sonde p₀: 872.3 mb
Kestrel: p₀ 871.0 mb, T₀ 22.4 °C, RH₀ 19.3 %, ws₀ 0.5 m/s, wd₀ 45 true
Height attained (m AGL) 207 at 0306 LT ^{UTC}
Remarks: Sky condition, battery level, etc.

Ascent number: 41 Start ascent (LT): 0311 ^{UTC} Sonde p₀: 872.5 mb
Kestrel: p₀ 871.0 mb, T₀ 23.3 °C, RH₀ 14.6 %, ws₀ 2.4 m/s, wd₀ 200 true
Height attained (m AGL) 409 at 0322 LT ^{UTC}
Remarks: Sky condition, battery level, etc.

Good CBL growth this mng. Inv. broken during last descent.
Winds increased at sfc & became turbulent

Ascent number: 42 Start ascent (LT): 0332 ^{UTC} Sonde p₀: 872.4 mb
Kestrel: p₀ 870.8 mb, T₀ 24.5 °C, RH₀ 10.8 %, ws₀ 1.4 m/s, wd₀ 40 true
Height attained (m AGL) 208 at 0332 LT ^{UTC}
Remarks: Sky condition, battery level, etc.

Ascent number: _____ Start ascent (LT): _____ Sonde p₀: _____ mb
Kestrel: p₀ _____ mb, T₀ _____ °C, RH₀ _____ %, ws₀ _____ m/s, wd₀ _____ true
Height attained (m AGL) _____ at _____ LT
Remarks: Sky condition, battery level, etc.

TOP 4 9/9