ARM Data analysis 18-24.06.2008

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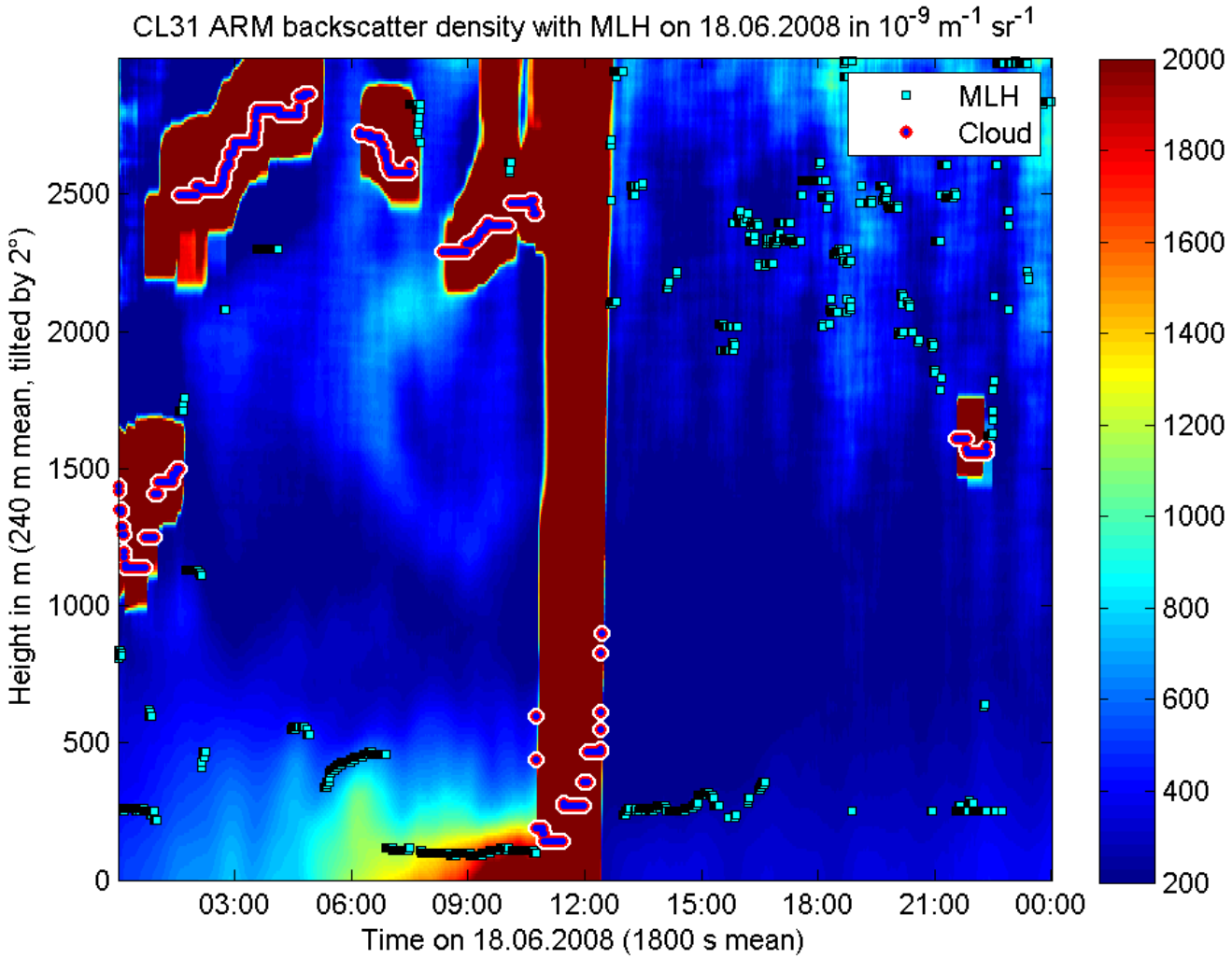
Comments

Comments about the plots

- The time used in plots are in UTC
- All comments should be referred to UTC time
- Primarily one gradient is calculated. It will report the strongest gradient on that particular moment.
- In some cases two gradient minima's have been calculated
- Averaging in time 1800 seconds, in height 240 meters

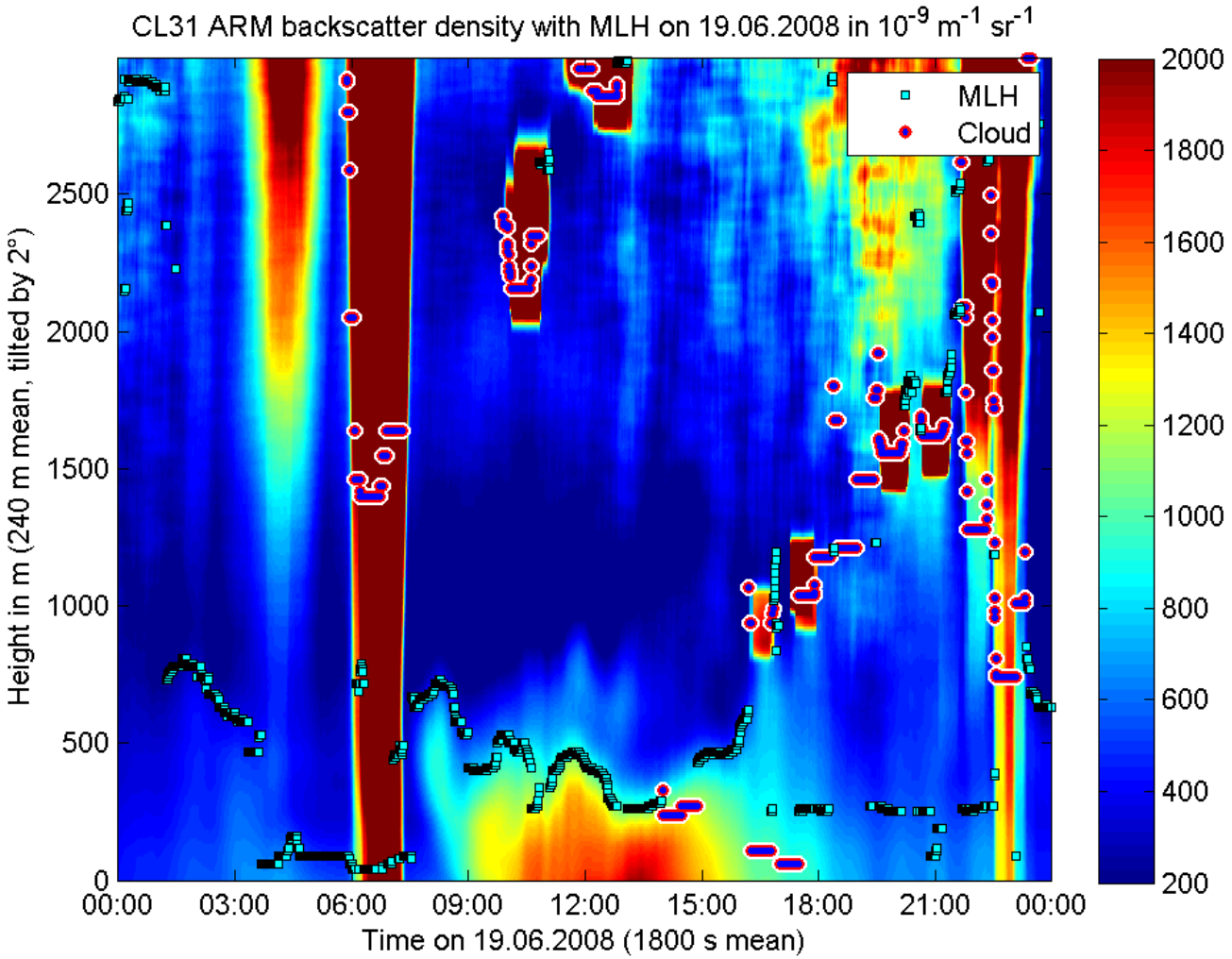
2008-06-18

- Shallow layer at around 250m, but apparently the actual layer is at above 2000m for the day time
- Rain shower at around noon clearing up the morning high concentration (starts after 6am)



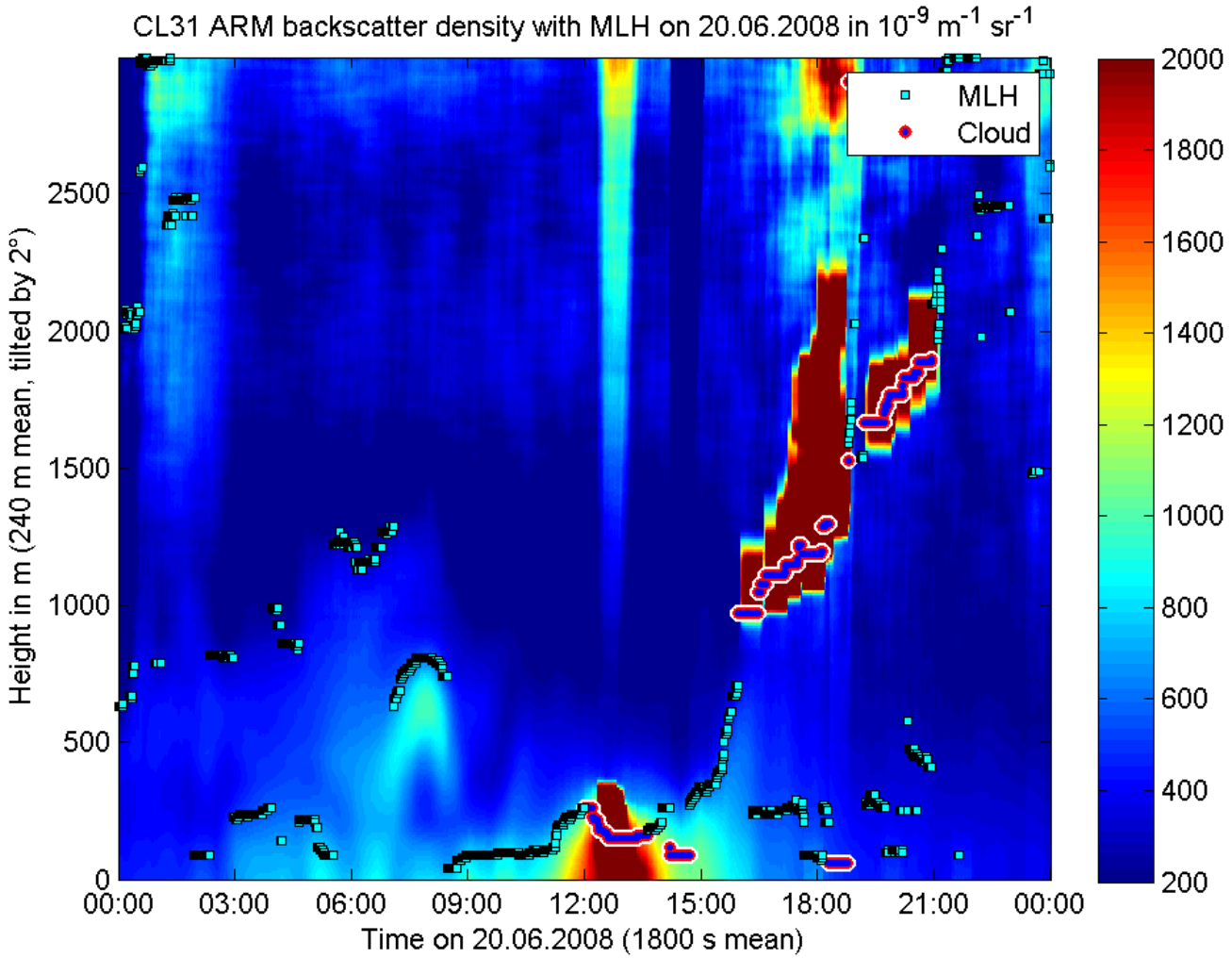
2008-06-19

- 'Nighttime' layer at around 400m
- Evolution seen on afternoon rising up to about 1500m
- Occasional low clouds seen
- Notice increased signal from 9 to 15 during nocturnal layer



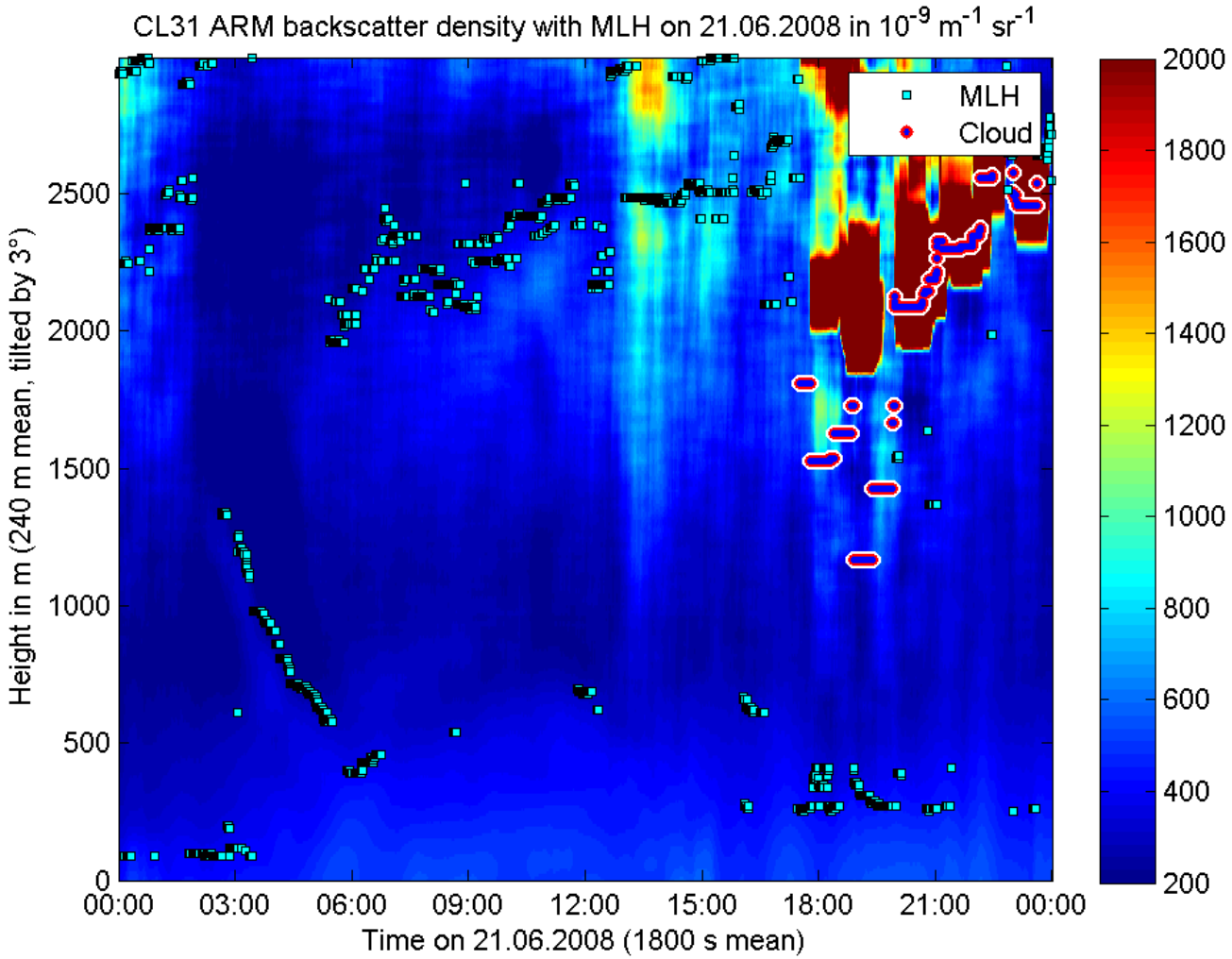
2008-06-20

- 'Nighttime' two different layers identified
- In the morning shallow nighttime layer at 150m
- Nice evolution at 15:00 rising up to 2000m
- Notice increased signal from around 12 during nocturnal layer



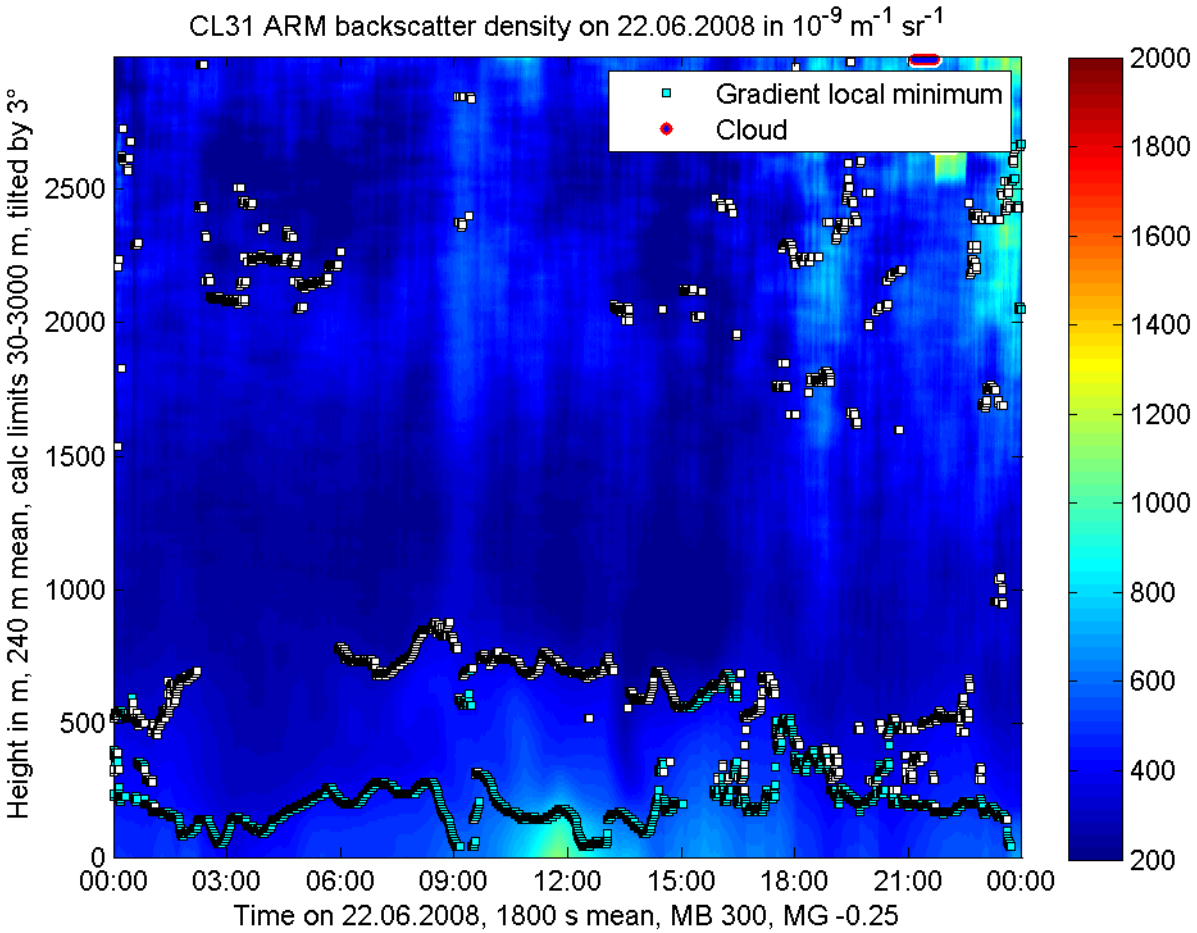
2008-06-21

- Decrease of MLH seen after 3am from 1500m to 500m
- Residual layer at 2500m triggers the algorithm
- No significant signal during day time
- Low clouds seen at evening



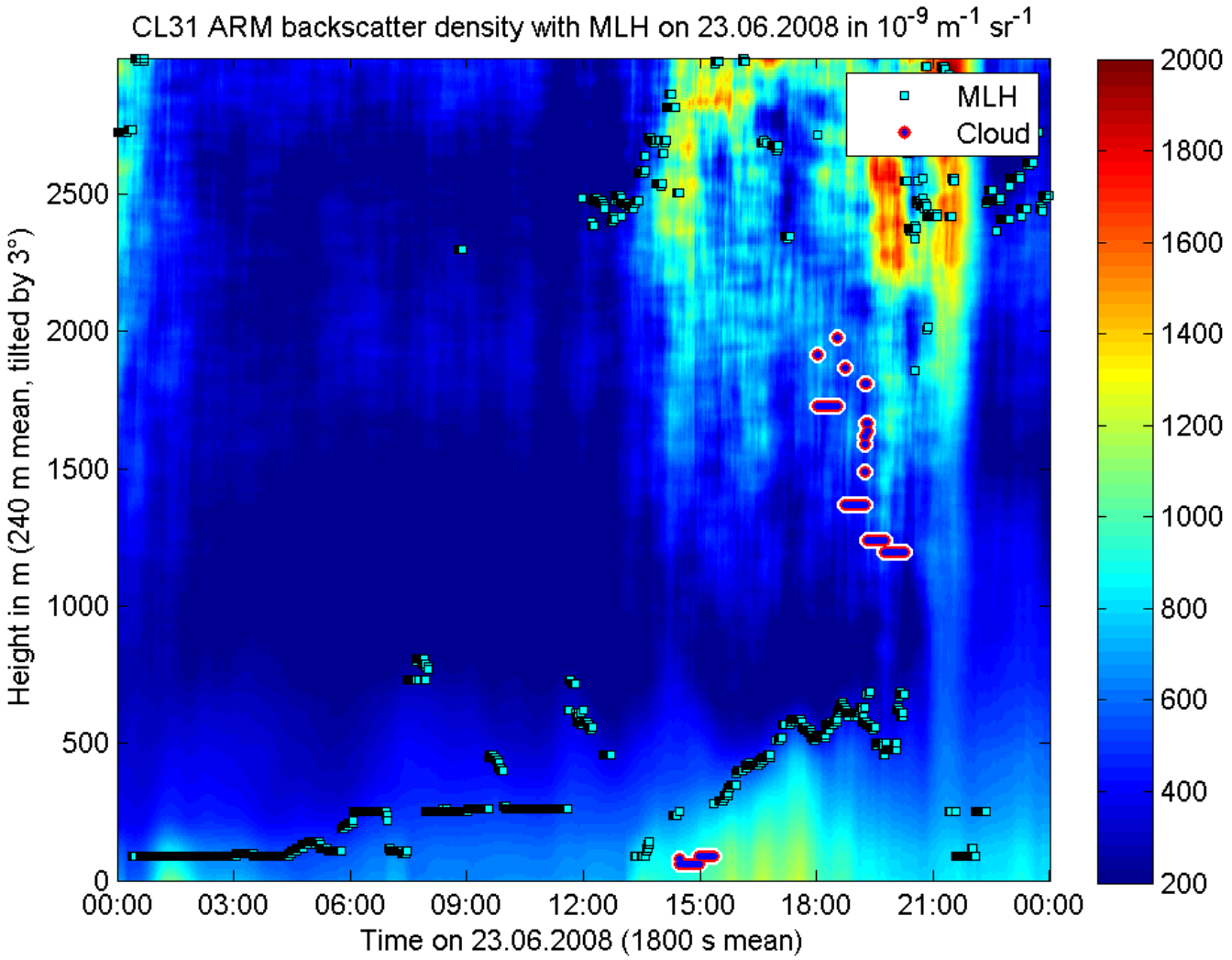
2008-06-22

- Two gradients calculated for the day
- Very clear day (minima backscatter signal) with several layers (at 2500m, and shallow layers at 250m and 750m)
- Lower layer converge each other on afternoon
- Higher layer could be residual from yesterday
- Again some excessive concentration seen around 12



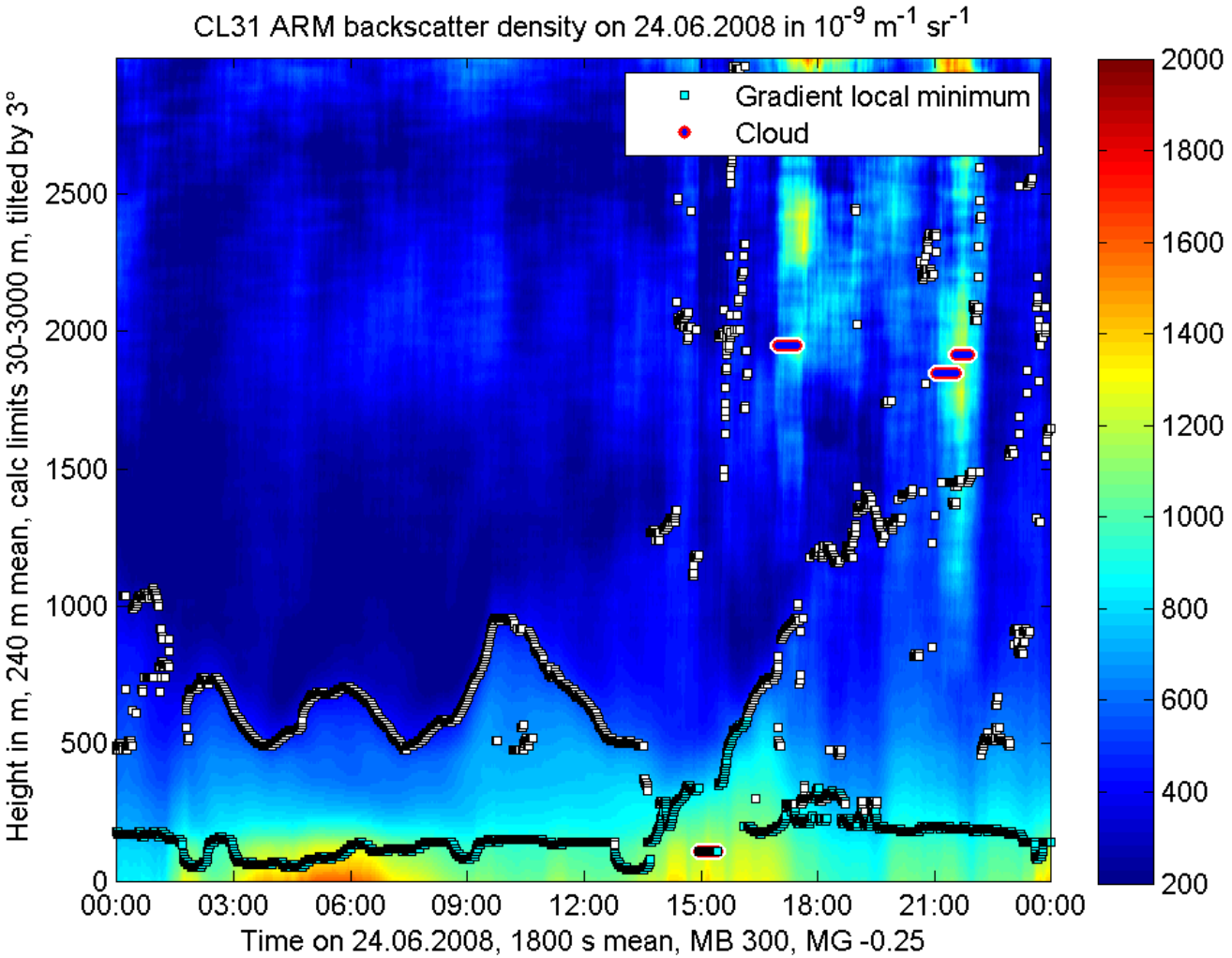
2008-06-23

- Low altitude night time layer at around 100m
- Some increased concentration seen on afternoon with elevated layer height

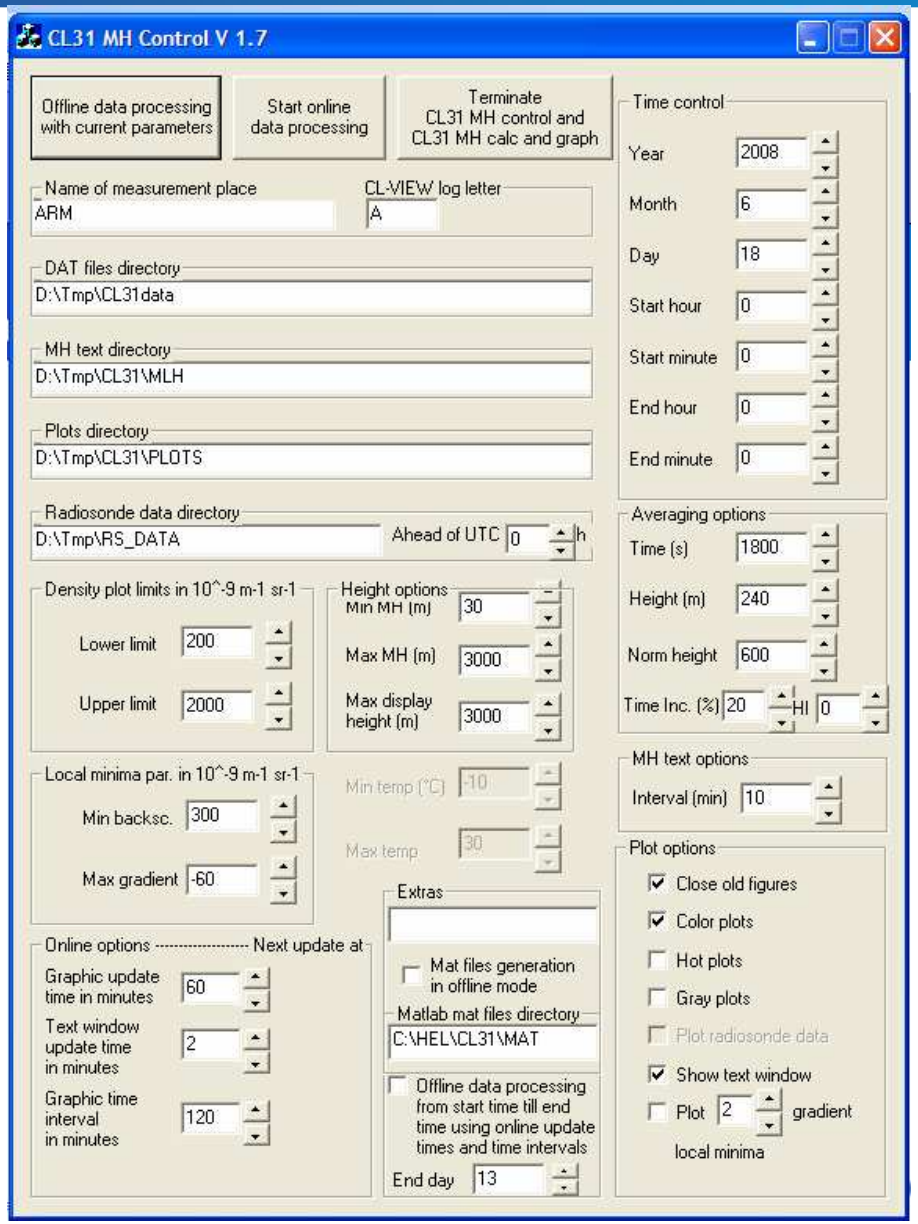


2008-06-24

- Two gradients calculated
- Shows shallow layer at around 150m
- Residual layer between 500 to 1000m which converges to days MLH rising up to over 1500m
- Notice the day time low layer at around 250m



Parameters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Offline data processing with current parameters
Start online data processing
Terminate CL31 MH control and CL31 MH calc and graph
Name of measurement place
ARM
CL-VIEW log letter
A
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MH text directory
D:\Tmp\CL31\MLH
Plots directory
D:\Tmp\CL31\PLOTS
Radiosonde data directory
D:\Tmp\RS_DATA
Ahead of UTC
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h
Density plot limits in 10^-9 m-1 sr-1
Lower limit
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Upper limit
2000
Height options
Min MH (m)
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Max MH (m)
3000
Max display height (m)
3000
Local minima par. in 10^-9 m-1 sr-1
Min backsc.
300
Max gradient
-60
Min temp (°C)
-10
Max temp
30
Online options
Next update at
Graphic update time in minutes
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Text window update time in minutes
2
Graphic time interval in minutes
120
Extras
Mat files generation in offline mode
Matlab mat files directory
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Offline data processing from start time till end time using online update times and time intervals
End day
13
Time control
Year
2008
Month
6
Day
18
Start hour
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Start minute
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End hour
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End minute
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Averaging options
Time (s)
1800
Height (m)
240
Norm height
600
Time Inc. (%)
20
HI
0
MH text options
Interval (min)
10
Plot options
Close old figures
Color plots
Hot plots
Gray plots
Plot radiosonde data
Show text window
Plot
2
gradient
local minima