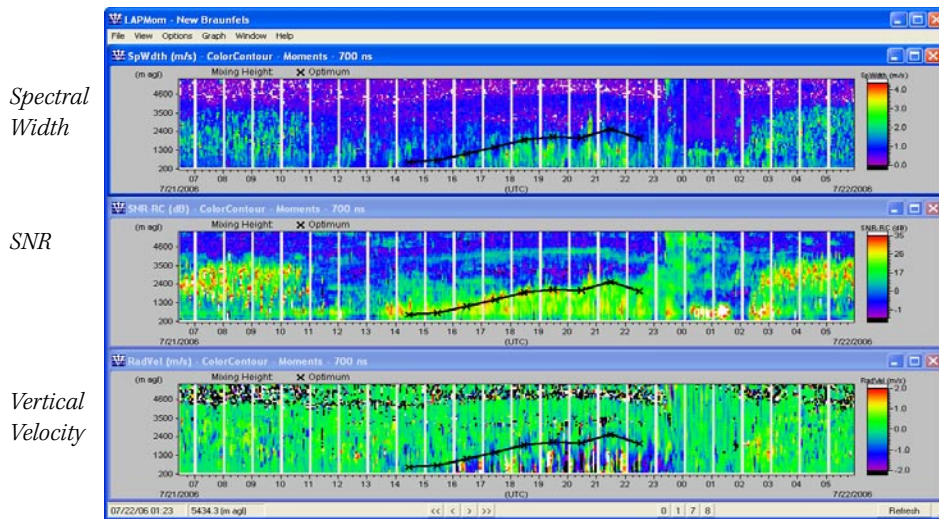


# Vaisala Wind Profiler Moments Display Software LAPMom™



## Benefits

- Diagnosing mixing layer evolution and growth
- Automatically calculate mixing layer from moments data
- Display mixing layer data
- Monitoring atmospheric structure/layers
- Monitoring LAP® radar wind profiler performance
- Display melting layer data from the optional Melting Layer software

## Displaying moments, mixing layer and melting layer data

The Vaisala LAPMom™ software allows users to easily display and explore moments data obtained from the LAP® family of radar wind profilers. LAPMom™ reads moments data and refractive index structure parameter ( $C_n^2$ ) data produced by the LAP-XM™ real-time  $C_n^2$  module.

LAPMom™ provides several data visualization schemes using contour plots of time series moments data including, signal-to-noise ratio (SNR), spectral width, radial velocity, and  $C_n^2$ . LAPMom™ allows users to diagnose mixing layer evolution and growth, monitor LAP® radar wind profiler performance, and illustrate atmospheric structure and layers.

LAPMom™ also has a built-in data reduction scheme to reduce noise in the displays and enable clearer displays for plotting longer time periods. Data reduction options include averages, medians, maxima, and minima. Time periods are user-defined (minutes, hours, days, or months).

LAPMom™ can create Web-ready images in bitmap and GIF formats. LAPMom™ can also run in batch mode to automatically generate images and displays.

## Software features

- Creates time-sequence display of signal-to-noise ratio, spectral width, radial velocity, and  $C_n^2$  as color contours
- Opens both low and high mode data files at the same time
- Filters and displays moments data based on user-specified setting
- Opens and displays data from multiple moments and  $C_n^2$  files
- Opens and displays wind and temperature data from the LAP-XM™ database
- Creates averages, medians, maxima, and minima of Moments data for a user-definable period of time
- Creates logarithmic and normalized displays
- Creates displays of range-corrected signal-to-noise ratio
- Creates bitmap and GIF images and saves output to text files
- Runs in batch mode using command lines for full automation
- Creates daytime mixing heights using three user selectable algorithms using moments or filtered moments and RASS data
- Allows users to subjectively edit or quality control mixing heights
- Creates wind barb and temperature profile displays
- Opens and displays data from mixing and melting layer data files
- Overlays mixing heights and optional melting layer on any open displays
- Allows export of reduced, filtered and mixing height data to a text file
- Displays can be synchronized in time

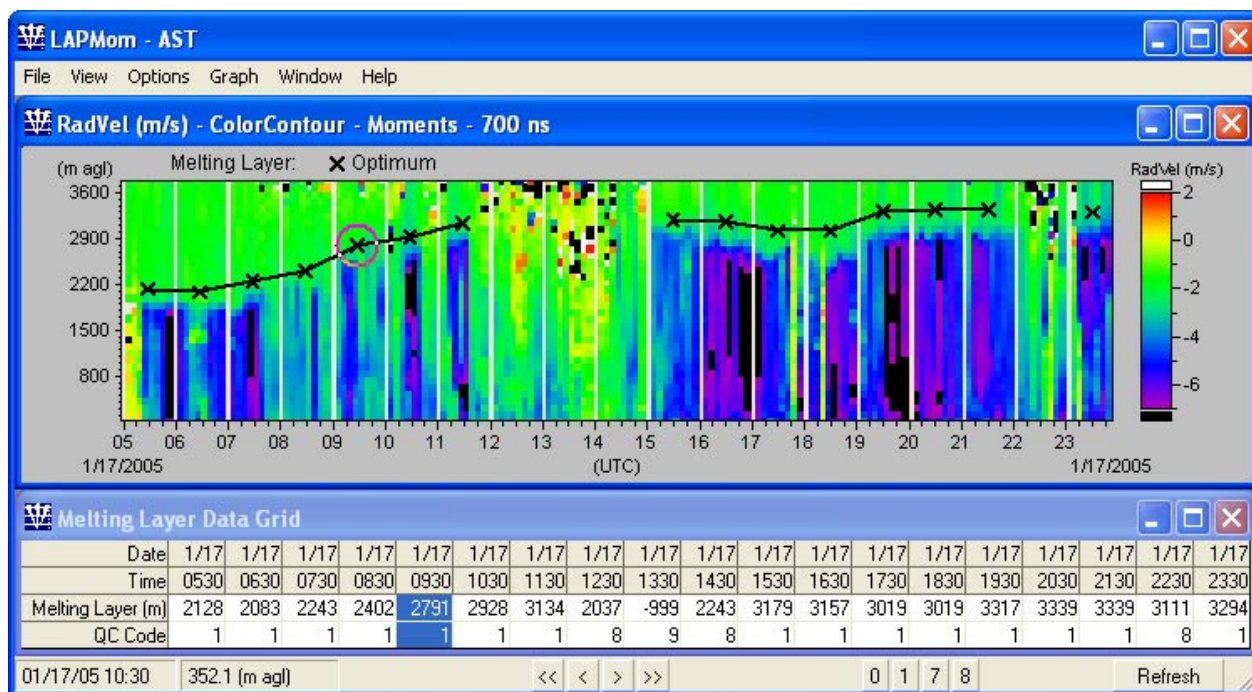
# Technical data

## Hardware requirements

Operating system	Windows® NT, 2000, or XP recommended
Processor	Pentium IV minimum 1 GHz
RAM	128 MB minimum
Hard drive space	10 MB
Color depth	More than 256 colors
Resolution	XGA (1024 x 768) or better

## Data operations

Data input	
Winds data	Lap-XM™ database
Moments data	Moments (.mom or .mts) files
Spectral width data	Spectral width (.spc) data files
$C_n^2$ data	LAP-XM™ $C_n^2$ (d*.txt) or $C_n^2$ (.CN2) files
Mixing layer data	Mixing layer (.pbl) files
Melting layer data (optional)	Melting layer (.ml) files
Data output	
Moments data	Graphical files (.bmp and .gif) and text files
Mixing layer data	
Melting layer data	



Displaying melting layer data generated by the optional Melting Layer software.



Software was developed by STI for distribution by Vaisala



**Vaisala Oyj**  
Helsinki, Finland  
Tel: + 358 9 894 91  
Fax: + 358 9 8949 2227

**Vaisala Inc.**  
Boulder Operations  
Tel: +1 303 499 1701  
Fax: +1 303 499 1767

For other Vaisala locations visit us at:  
[www.vaisala.com](http://www.vaisala.com)

