

The new Bunkers “Universal Mean Wind” option.

RAOB contains 2 Storm Motion options: the Traditional and Bunkers methods. The Bunkers method initially allowed the user to only specify the upper and lower boundaries of the Steering flow layer within a specific range (see below).

RAOB Program Configuration Options

Display Preferences | **Algorithm Options** | Parcel Lifting & CAPE | System Configuration | Dates & Fonts | Data Processing

Turbulence [CAT]: FAA USAF

Icing (structural): AFGWC Smith-Feddes USAF

Cloud Analyses: RICAPS Traditional (T/Td) CFRL (if available)

Icing threshold: 75% RH (Range: 1 - 99%)

Storm Motion Method: Traditional Method **Bunkers Method** use Universal Mean Wind

Steering flow layer - upper: 6 km
Steering flow layer - lower: 0 km

With the RAOB 6.5 program, there is now an option to automatically calculate the Universal Mean Wind by using variable range parameters (see below).

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Steering flow layer - upper: Use 65% of the Most-Unstable CAPE EL (MUCEL) height.
Steering flow layer - lower: Use the 'Parcel Lifting & CAPE' Tab to adjust the MUCAPE search layer depth to find the effective inflow layer.

By checking the “Universal Mean Wind” option, RAOB will automatically find the steering flow layer using variable upper and lower search parameters. The upper level is normally 65% of the MUCEL (Most Unstable CAPE’s Equilibrium Level hgt), where the percentage value is user configurable. The lower level is determined by finding the effective inflow layer, which is the first level where CAPE \geq 100 J/kg and CIN \leq 250 J/kg. This search layer is normally the lowest 350 mb, which is also user configurable via the “Parcel Lifting & CAPE” tab as seen below.

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Lifted Parcel Level: Surface * for SBCAPE **Most Unstable** for MUCAPE Mean Layer for MLCAPE

Multi-Lift Options

Parcel Lifting: MUCAPE Search Layer: 350 mb

Mean Lower Layer: 100 mb
This layer is also used to calculate the CCL.