Freezing level vs. -20C level for large hail in the Boise CWA (1995-2001)

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Hail reports from spotters for warm season thunderstorm days were analyzed. Severe hail reports were plotted against the freezing level and -20C level from the RAOB at Boise for the nearest synoptic time.

A spring time maximum and summer maximum are apparent. On days when multiple large hail reports were received, only one report was plotted, the maximum size hail was used for the plot.

The freezing level can be well over 14 Kft in order to receive large hail over our CWA.

Analysis of the ground elevation of the reports indicates severe hail can survive a fall of up to 12 Kft below the freezing level with 10 reports while the freezing level was 11.0 Kft or higher above the ground elevation. Four of these reports were quarter sized hail and one report was 1.75 inches in diameter.

