

Snow vs. Rain at Boise Using 850 Temperature and 850 - 700 mb Thicknesses

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Temperature...

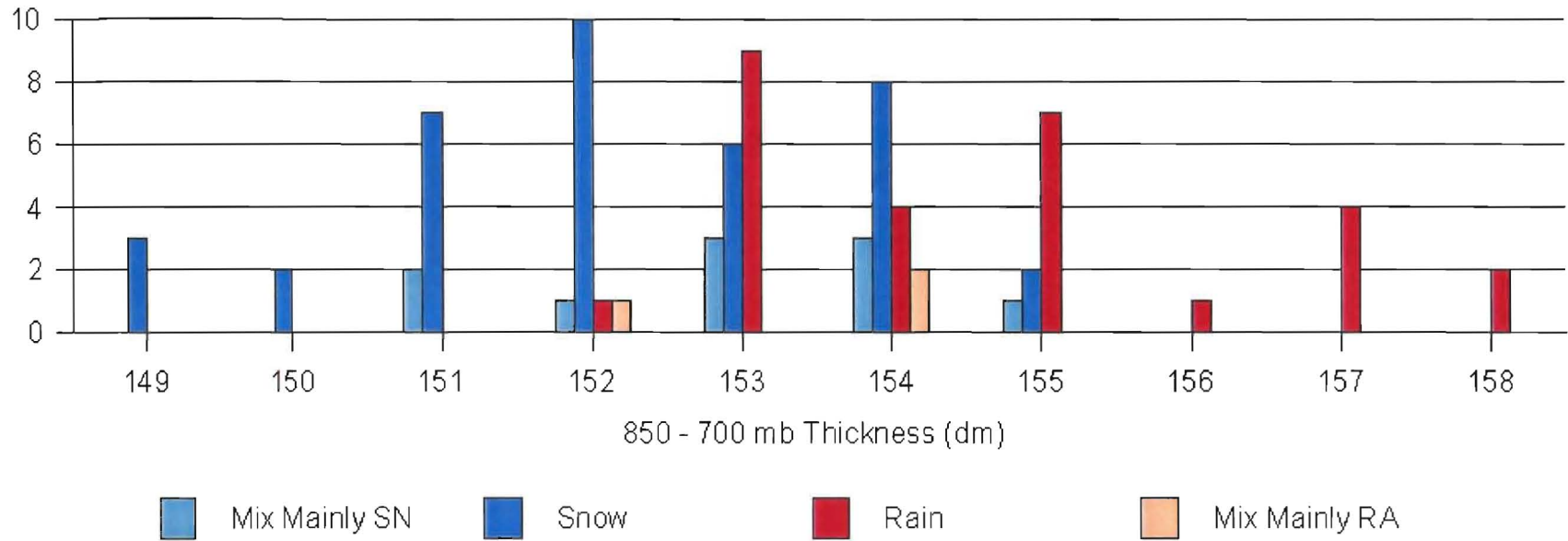
The 850 mb temperature can be as high as **1.5 degrees** Celsius to produce snow on the valley floor providing the surface temperature is **35F** or below...with a mixed precipitation range from 34 to 37 degrees F. In only 4 out of 148 cases did pure rain fall with a surface temp of <35F. In only 1 case did pure snow fall above 35 degrees.

Thickness...

For the **850 to 700 mb** thickness graph, values below 153dm overwhelmingly produce snow and values above 154dm overwhelmingly produce rain regardless of any other parameters.

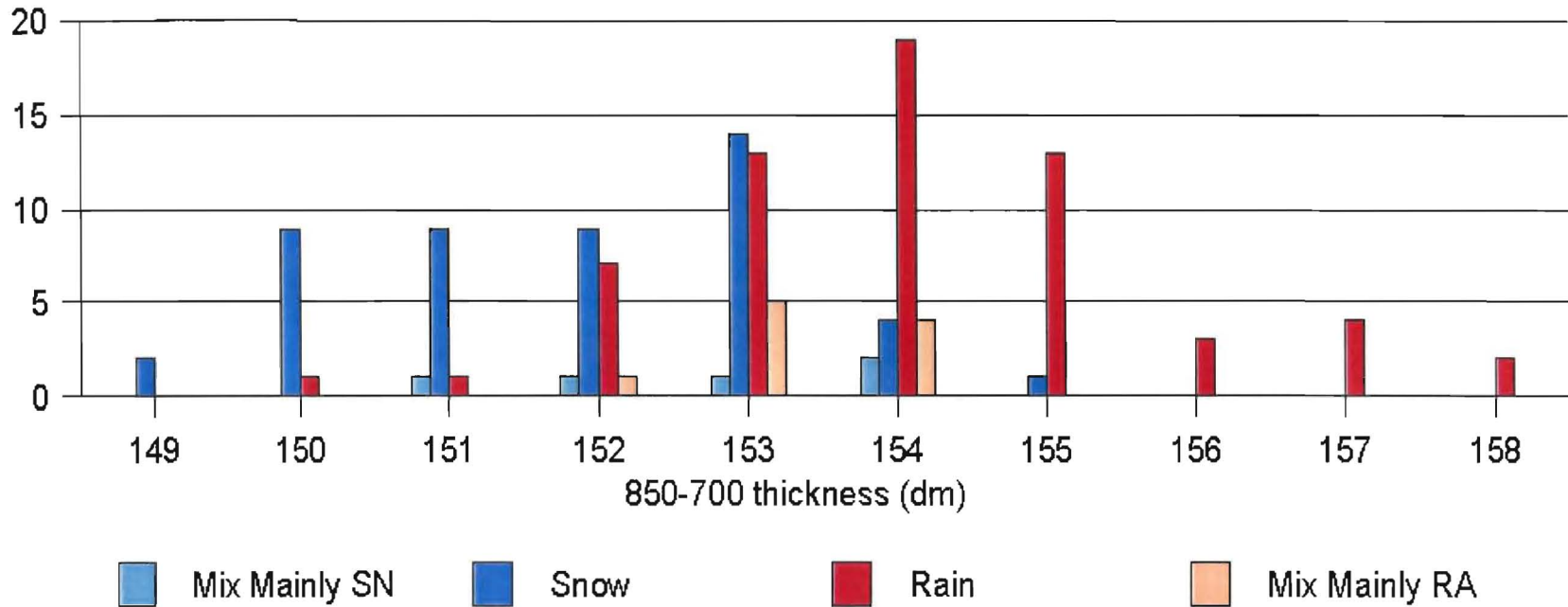
The demarcation thickness values can be further narrowed by identifying the event type. With a pre-front **Warm Advection** event the 850mb-700mb thickness rain/snow demarcation is lower than with a post- front **Cold Advection** event. Successfully forecasting rain vs. snow for the "either-or" ranges is absolutely dependent on the surface temperature. **35F** is the demarcation temperature between rain and snow in all but 1 FZRA case for these thickness ranges. ($\leq 35F = \text{snow}$... $>35F = \text{rain}$).

Snow vs. Rain 850-700 mb Thicknesses at BOI Post Front Cold Advection

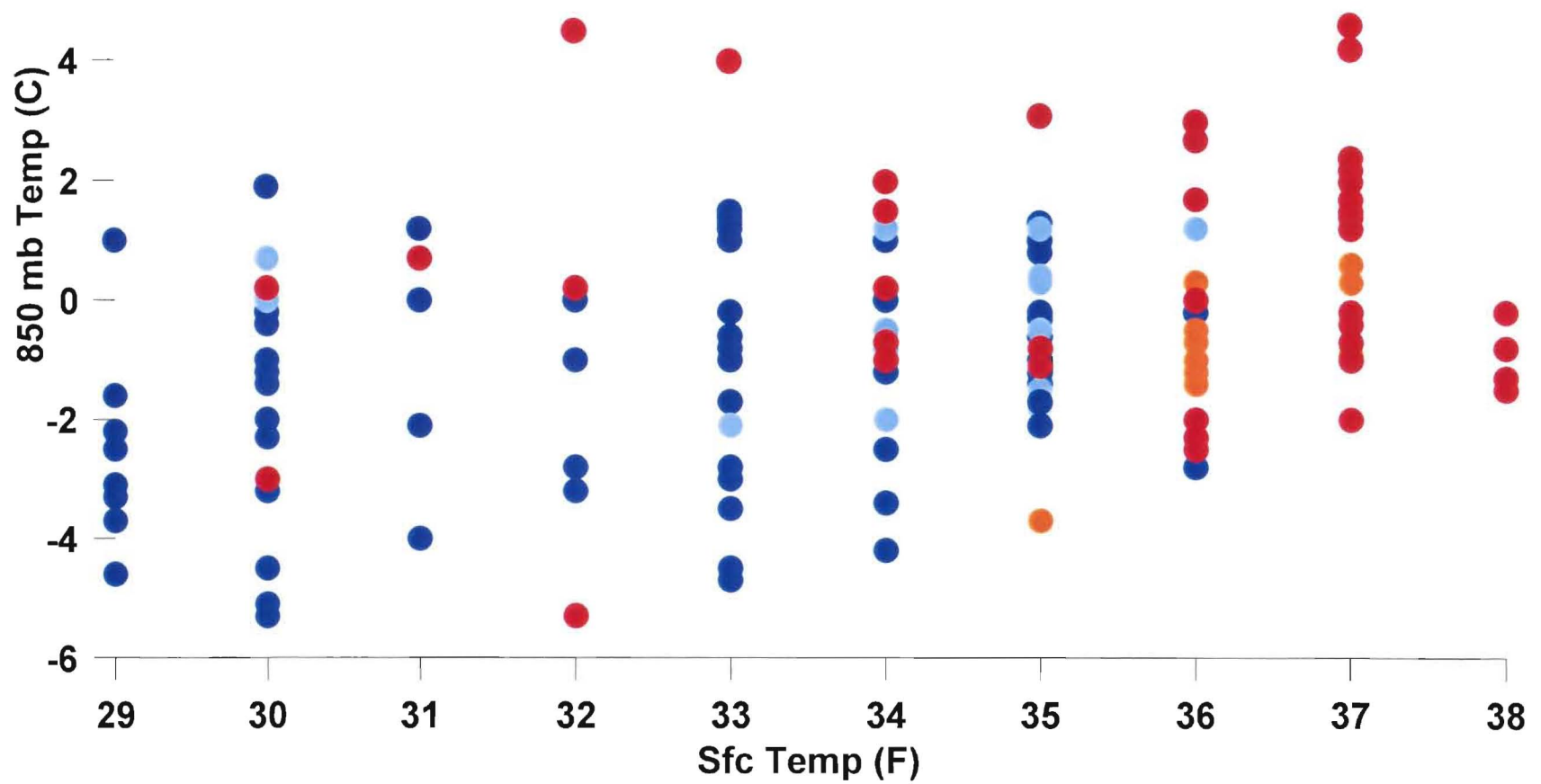


Snow vs. Rain 850-700 mb Thicknesses at BOI

Pre-Front Warm Advection



Sfc T (F) and 850mb T (C) of Rain vs. Snow at BOI



- Snow
- Mix, Mainly Snow
- Mix, Mainly Rain
- Rain