

General Description:

This tool uses data from Snowpilot.org to display the geographical distribution of various snowpack properties within a selected date range. In addition to snowpit data, this tool shows recent avalanche activity for backcountry forecast zones. The parameters for display can have three different categories:


- Text – a summary of ECT, PST, and CT stability test results
- Dot Color:
 - ACTIVITY –recently observed activity recorded by the snowpit observer
 - ECT – Extended Column Test results. The color category follows the categories from the paper:[Comparing Extended Column Test Results to Signs Of Instability in the Surrounding Slopes](#)
 - HS – The height of snow (e.g., total snow depth).
 - LEMONS – measurement of structural weakness in the snowpack: [A field method for identifying structural weaknesses in the snowpack.](#)
- Line Color- The color of the border around the dots:
 - Same as the dot color
- Observer – observer group filter to select a specific subset of pits:
 - All – all the snowpit in the Snowpilot database with geolocation
 - Pros – snowpits associated with a professional operation or the observer's profile indicates that they are professionals.
 - CAIC – only snowpits associated with CAIC user group.
- State – Currently, only CO and MT.
- Avalanche display method – This layer can be turned on and off with the layer control icon at the map's upper right.
 - A simple average daily avalanche observation counts for each backcountry zone.
 - AAI – Avalanche Activity Index (Schweizer et al., 2003). The AAI is a weighted avalanche activity index. It is given by:

$$AAI = \sum_i \frac{10^{D_i}}{1000}$$

Where D_i is the D-size of each avalanche, for example, each D1 avalanche gets a value of 0.01, each D2 avalanche receives a value of 0.1, and each D5 avalanche gets a value of 100. The sum of the total values of all the avalanches is the AAI. The daily AAI is somewhat correlated to the avalanche danger [On the Relation Between Avalanche Occurrence and Avalanche Danger Level.](#)

Friendly tips:

- Hover Tool – hovering on a specific backcountry zone will briefly describe the avalanche activity for the selected dates. The description includes:
 - Zone name
 - Mean daily AAI or avalanche count for the given date range
 - List of reported avalanches by D-size for the specific backcountry zone and the given date range.
- Click on Tool - a click on a snowpit dot opens a window with the entire pit (you need to have an account at snowpilot.org to see the whole snowpit)

- You can use the layer control button () to turn the avalanche observation layer on and off.

How Can You Help:

- Dig snowpits
- Sign up and enter your data to Snowpilot.org
- Make sure your pits are geo-located
- Report avalanches to your avalanche center
- Leave comments [here](#)
- Leave the highway avalanche forecaster alone!

References:

Schweizer, J., Kronholm, K., and Wiesinger, T.: Verification of regional snowpack stability and avalanche danger, *Cold Reg. Sci. Technol.*, 37, 277–288, [https://doi.org/10.1016/S0165-232X\(03\)00070-3](https://doi.org/10.1016/S0165-232X(03)00070-3), 2003.