

Wind Rose Tutorial

What is a wind rose?

A wind rose is a circular display of how wind speed and direction are distributed at a given location for a certain time period. Wind roses on our site are generated by the [Colorado Avalanche Information Center](#).



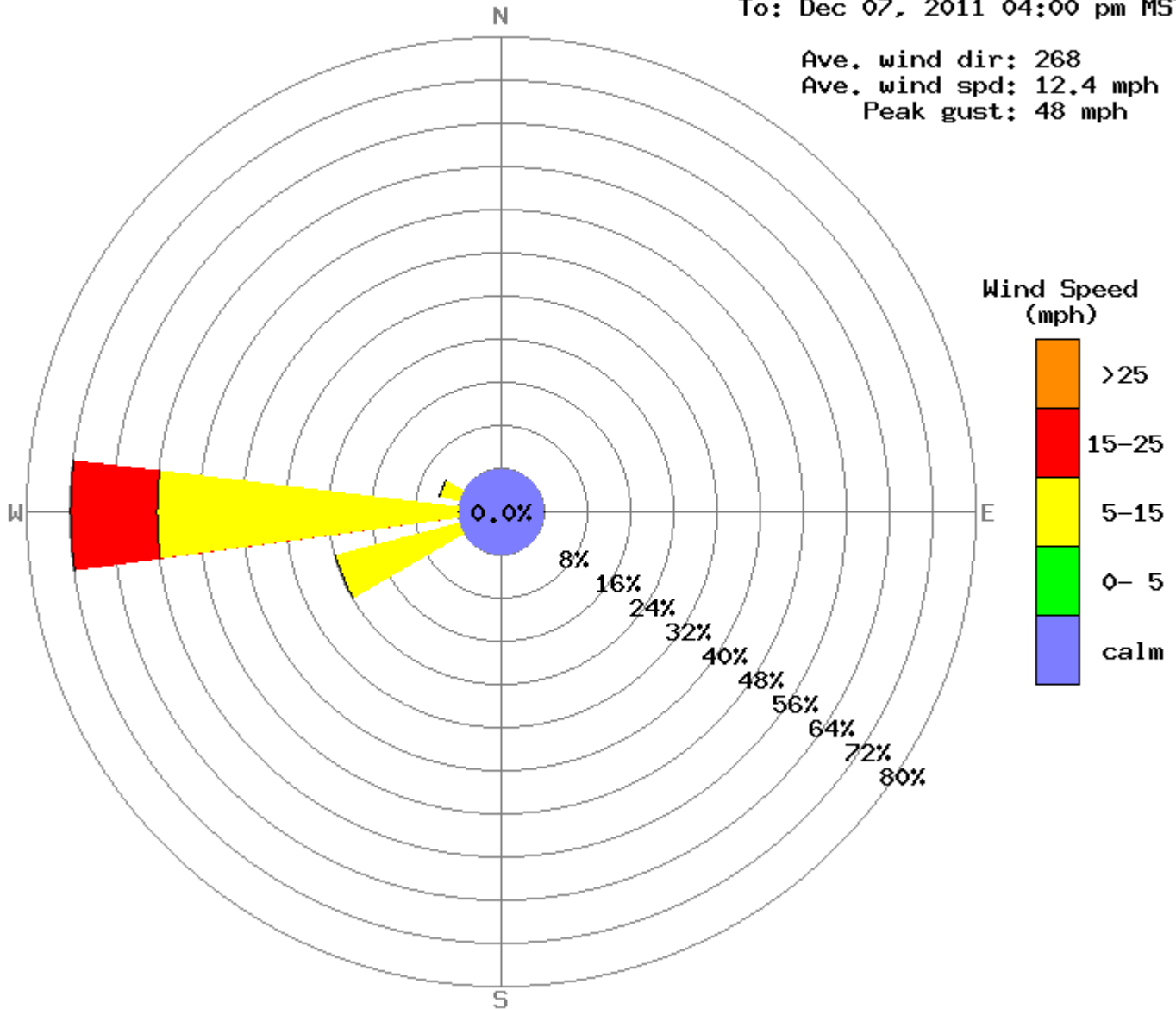
Below is a sample wind rose from December 6th - 7th from the Timber Weather Station

Timber Yellowstone CI (GNFAC) 9400 ft

No. of observations: 25

From: Dec 06, 2011 04:00 pm MST
To: Dec 07, 2011 04:00 pm MST

Ave. wind dir: 268
Ave. wind spd: 12.4 mph
Peak gust: 48 mph



How do I read it?

The **header** identifies the weather station. In the example above, it is the Timber station at the Yellowstone Club. It displays the last 25 hours of data covering the date and time range shown on the upper right. A summary of average wind direction, average wind speed, and peak gust is given on the right as well.

The **most important data** is displayed by each "spoke." The length of each "spoke" tells the frequency of wind coming from a particular direction. In this case 72% of the given time (25 hrs), winds blew from the W. 24% of that time, winds blew from the WSW.

To determine **wind speed frequency** is a little more difficult. Wind speeds are indicated by color. If a "spoke" is mostly one color, then winds blew mostly at the wind speed denoted by that color. In this case, 56% of the time, winds blew from the W at 5-15 mph. For the red section of the "spoke" which indicates winds at 15-25, you have to do a little math. The red section is between 72% and 56%. Subtract these two numbers and you get

16%. This means winds blew from the W at 15-25 mph for 16% of the time.

The circle in the center indicates calm winds. Winds were calm 0% of the time.

For a **detailed description** of wind roses by the NRCS and a page from which this description was based click [here](#).