

Which OBS for which avalanche type?

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At the 2004 ISSW, Roger Atkins proposed that—early in the terrain selection process—backcountry travellers could identify which types of avalanches were likely, e.g. wind slab, persistent slab, wet avalanche. These avalanche types correspond to the scenarios in traditional risk analysis. Variations on Atkins' approach have been incorporated into some public bulletins. The most likely avalanche types are called Primary Concerns by the Canadian Avalanche Centre, Threats by the Utah Avalanche Center or Avalanche Situations in Switzerland. The latest Swiss brochure for recreation in avalanche terrain suggests different observations for four different types of avalanche situations. To determine which observations are best for which types of avalanches, a field study was conducted in the winters of 2008-09 and 2009-10 in the Coast Mountains (over 35 days), Columbia Mountains (over 100 days) and Rocky Mountains (over 30 days) of western Canada. On each field day, an experienced field team rated the local avalanche danger, identified two dominant avalanche types and observed a standard set of 20 quick field observations. The quick observations included avalanches, wind transported snow, snowfall, etc. Correlations showed which observations were most useful when a specific type of avalanches was expected. For example, 24-hour snowfall correlated with the danger rating when storm snow slab avalanches were expected but not when persistent slabs were expected. Once the expected avalanche types have been identified, bulletin writers could—potentially—recommend that recreationists focus on certain local observations for better informed decisions.