WIND AND MOUNTAIN CLIMATOLOGY IN SEVERE ENVIRONMENTS:

Periodic Semi-Permanent Snow Bed Variability at Lava Cliffs and Alpine Visitor Center, Rocky Mountain National Park

Selected Years

Updated July 2021 D. E. Glidden

PERIODIC SUMMER SNOW BED COMPARISON AT LAVA CLIFFS 2005, 2019, 2020, 2021

It is remarkable how microtopography sculpts consistent and often predictable multi-decadal-long (and greater) wind patterns in many areas of the alpine.

Although perspective and distance of shot are important, 2019 at Lava Cliffs (following a spring of heavy snow) appears quite similar to 2005, although there may be a suggestion that the ice thickness (where the sign is located) is somewhat greater in 2005.

2020, on the other hand, appears to suggest a reduced volume over the prior years. The meteorological factors of summer 2021 take their toll, and visually reduce the ice extent in July comparisons.

Low snow years (as well as the effects of prevailing wind speed and direction, higher or lower average alpine temperature regimes, frequency and persistency of summer air mass exchanges, and variability of topographically-induced total percent of cloud cover) may yet be followed by more restorative snow deposits in a presumably overall warming mountain environment.

http://npshistory.com/publications/romo/wind-research/avc-lc-snowbed-variability-2020.pdf







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