

LAKE EFFECT SNOW SITUATIONS:
ANABATIC; ANACHORISMS; ANACHRONISMS; AND/OR, ANOMALISMS

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ABSTRACT

Lake effect snow situations, while having faded from investigative notice, continue to puzzle and harass. The 20th Anniversary of the 39th Meeting (in early February of 1972) in Oswego is but four years away. Most attendees at that meeting were snowed-in for one to two days. Changes in data and analytical techniques provide potential for renewed study of these episodes of such variation in snowfall conditions.

After some philosophical background relating to participating observation, the title topics were illustrated by showing 24 color slides and by giving a short demonstration.

BACKGROUND

The original intent for this paper was to discuss lake effect snowfall situations with particular emphasis on two recent significant episodes; i.e., 4-5 January, 1988 in the area of the Tug Hill Plateau (15 to 30 kms to southeast of Watertown, N.Y.), and, 25-26 February, 1988 in the area east of Lake Ontario (20 to 30+kms to the northeast of Oswego City). Snowfalls in the first instance ranged upwards to about 170 cms while in the second instance the depths ranged up to between 60+ and 120+ cms. Equating to about 6 feet, and 2 to 4 feet, respectively, these are substantial. The original hope was to obtain certain recorded data at one minute intervals from some locations much closer 'to the action' than Southwest Oswego. The requests were denied. Available resources for those periods made impractical the development of any substantial material for the Conference.

The alliterative title was chosen to emphasize the diversity of this interesting facet of snowfall; the lake effect snowfall situation. The terms apply roughly in the following ways:

ANABATIC - Rising air current (very much a part of the 'problem')

ANACHORISMS - Unsited to local circumstances; geographically:errors

ANACHRONISMS - Out of proper times

ANOMALISMS - Irregularities; deviations from **the** rule or expected

Where particularly applicable, the appropriate terms are added to slide descriptions.

COLOR SLIDES

1. Sunrise in advance of lake effect snowstorm.
2. Sketch, eastern part of Lake Ontario and immediate land areas showing some study locations
3. Vertical cloud development associated with Lake - ANABATIC.
4. Comparative picture over the Victoria Falls illustrating verticality.
5. 1972, during the ESC at Oswego; break in action; vertical development over Lake Ontario (and shows Mr. Liv Lansing).
6. 1972, January 25th, Oswego: social location in 'blizzardburst' conditions starting - ANACHORISM.
7. 1972, January: Snowburst period before ESC meeting in Oswego.
8. 1972, January: Drift and sticking accumulations - continued ANACHORISM.
9. 1986, Victoria Falls: Spray and condensation showing sharp demarkation similar to Lake Effect Snow Situations at times - cont. ANACHORISM.
10. Example of the mesolow - ANACHORISM.
11. 1972, late January: Christmas wreath - ANACHRONISM, during 'snowburst'.
12. View to north over Lake Ontario; cloud street: ANACHORISM & ANACHRONISM
13. 1966, Late January, Blizzard Period, wind traces at shoreline location WSW of Oswego by about 60 kms at Sodus Point.
14. The weather 'Sword of Damacles': poised cloud street advancing with very heavy snowfall - ANACHRONISM.
15. Travelling wrong, an auto accident - ANOMALISM.
16. A producing cloud street - ANOMALISM.
17. South of a cloud street, Lake Ontario to north.
18. 'MILKY SKY' south of cloud street located to north over Lake Ontario.
19. Advance of cloud street and 'snow wall' - ANOMALISM.
20. Complex cloud patterns along cloud street.
21. Advancing cloud street from the south (over land)- ANOMALISM.
22. Altostratus aspect to edge of lake effect cloud street - ANOMALISM.
23. Onset of snowfall with advancing edge of cloud street passing from north to south.
24. 1977, January; 'WHITE HELL' Friday a sunset - ALL.

Between slides 22 and 23 an attempt was made to demonstrate the intensity of snowfall during the final 9 hour phase of the January Blizzard of 1966. During that phase snowflakes averaged between 1½ and 2 cm; visibilities measured only in meters in generally chaotic conditions. Due to feather dampness, the demonstration failed, sadly!

COMMENTARY

The talk concluded in summarizing episode problems, touching on the many variables, and emphasizing the complexities to understanding these erratic events, especially as forecasting challenges.