

The 1935–2003 Air Temperature Record from the Summit of Mount Washington, New Hampshire

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Meteorological observations have been taken continuously at the summit of Mount Washington since 1932. Results of an analysis of the air temperature record over the 1935–2003 period show a statistically significant increase in mean temperature of 0.3°C , while the diurnal temperature range has decreased by 0.15°C . The decadal structure evident in the record reveals that, in contrast to North American trends, the summit experienced relatively cool temperatures in the 1940s. The late 1980s and early 1990s were relatively warm on the summit, in agreement with North American decadal trends. The times of daily maximum and minimum temperatures show that the summit climate is dominantly influenced by boundary layer processes 30% of the time and free air circulation 50% of the time. No evidence of a “weekend effect” was found.

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