BACKGROUND TOPICS FOR
2007-2008 MOUNT WASHINGTON OBSERVATORY
EDUTRIP PROGRAMS WITH DAVE GLIDDEN

MOUNT WASHINGTON WIND CLIMATOLOGY: RECENT DATA ANALYSIS AND HISTORICAL CHANGES IN SUMMIT WIND SENSOR LOCATION

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INFORMAL DATA ANALYSIS

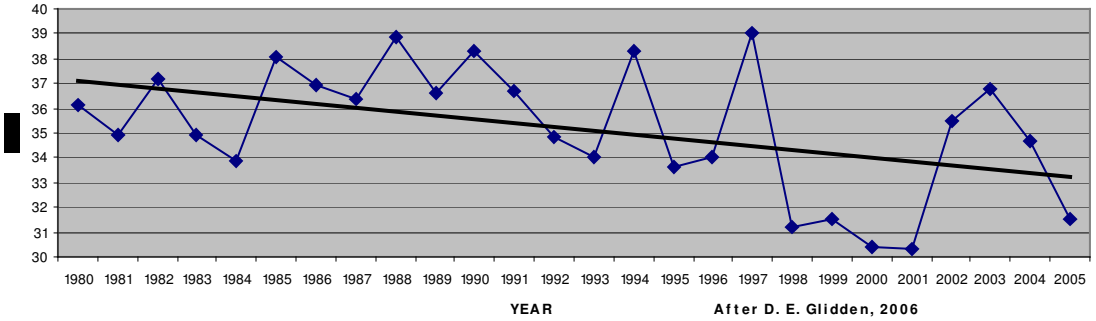
The following MWO graphics are a sample of the type of information reviewed and analyzed in a non-technical format by participants of mountain climatologist Dave Glidden's workshops. Some of the examples reflect differences in recorded wind data both before and after the Observatory moved to its current building. Other variables studied may be long-term temperature, snow, or pressure, both for Mount Washington and other mountain environments. All work toward a lively discussion of what these data may indicate, and -- in terms of temperature, for example -- how these may relate to long-term climate change.

Dave Glidden is a Field Specialist in Wind and Mountain Climatology, and has conducted wind studies for the National Park Service in Rocky Mountain National Park in Colorado. More recently, he has pursued field work on the variability of mountain winds and gust factors in Denali National Park in Alaska. A strong advocate of women in the sciences, he has been fortunate to have many women share in the excitement and rewards of field work. (Laura Capella, a former Observatory EduTrip ATL in mountain climatology during the early 1990's, assisted Dave during his 1995 field studies in Denali.) He specialized in Mountain Climatology at the University of Massachusetts/Amherst, where he directed a climatological research project in the White Mountains of New Hampshire, which included extensive field studies from the Presidential to the Franconia Ranges. Also while at UMASS, he investigated severe glacier winds in the early 1970s near the Icy Bay area of southeast Alaska. He has published studies and articles on mountain winds and climatology, and has been actively involved, through the Observatory, in trying to improve the participation of girls and women in the sciences. He has been associated with the Mount Washington Observatory since 1970, and has led winter EduTrips in mountain meteorology and climatology since their beginning some 14 years ago. When not in the field, Dave has been Head Coach of women's soccer at the collegiate level.

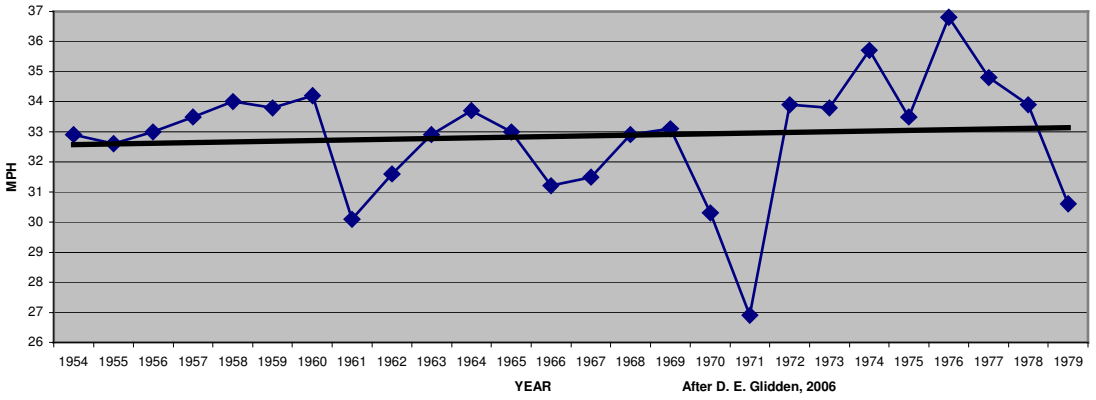
MOUNT WASHINGTON
OBSERVATORY PHOTO

MWO AVERAGE ANNUAL WINDSPEED
1980-2005
AVERAGE ANNUAL WINDSPEED = 35.2 MPH
25-YEAR POST-MOVE TREND: 37.1 to 33.2 MPH, OR ~3.9 MPH DECREASE

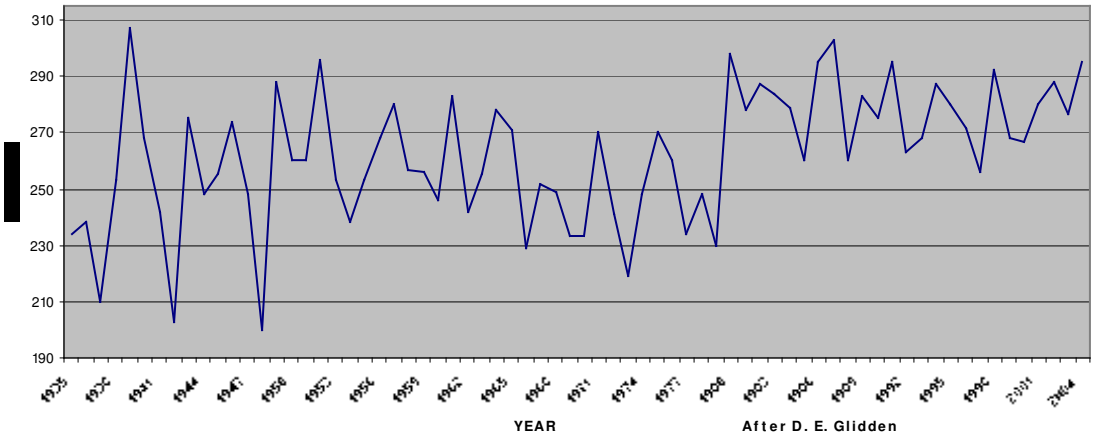
(1954-1979 AVERAGE (32.8) VS. 1980-2005 AVERAGE (35.2) = + 2.5 MPH INCREASE)



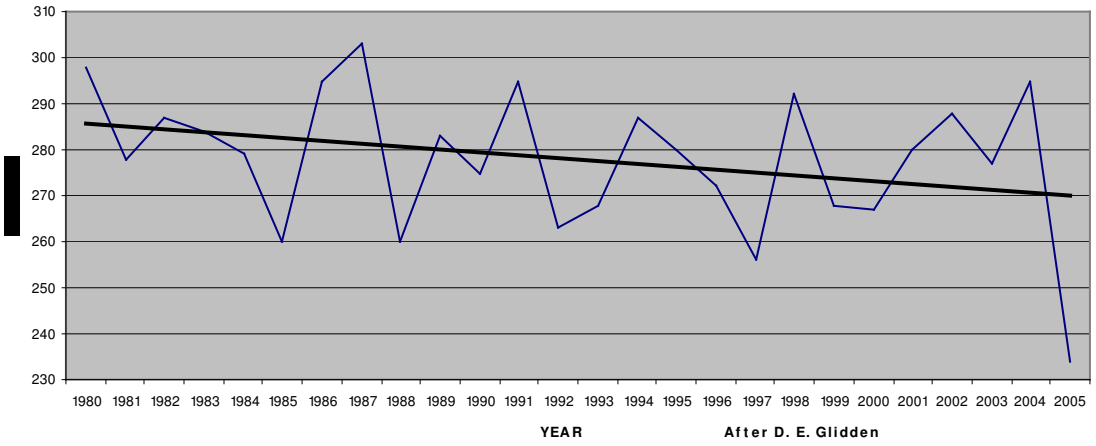
MWO AVERAGE ANNUAL WINDSPEED
1954-1979
AVERAGE ANNUAL WINDSPEED = 32.8 MPH
25-YEAR PRE-MOVE TREND: 32.7 TO 33.1, OR ~0.4 MPH INCREASE



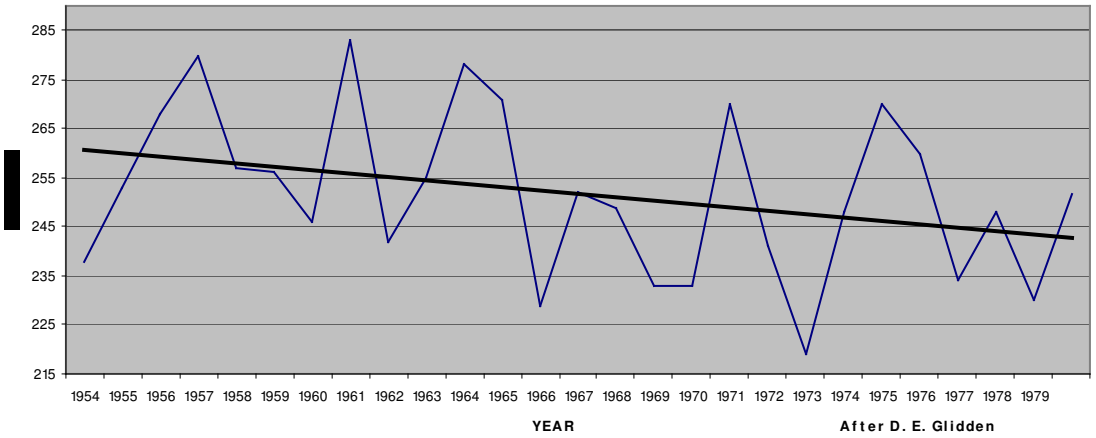
MWO AVERAGE ANNUAL PEAK GUST WIND DIRECTION 1935-2006
1954-79 AVERAGE (251.6) VS. 1980-2006 AVERAGE (277.8) = 26.2 DEGREE CHANGE
(OBSERVATORY MOVED TO NEW BUILDING IN 1980)



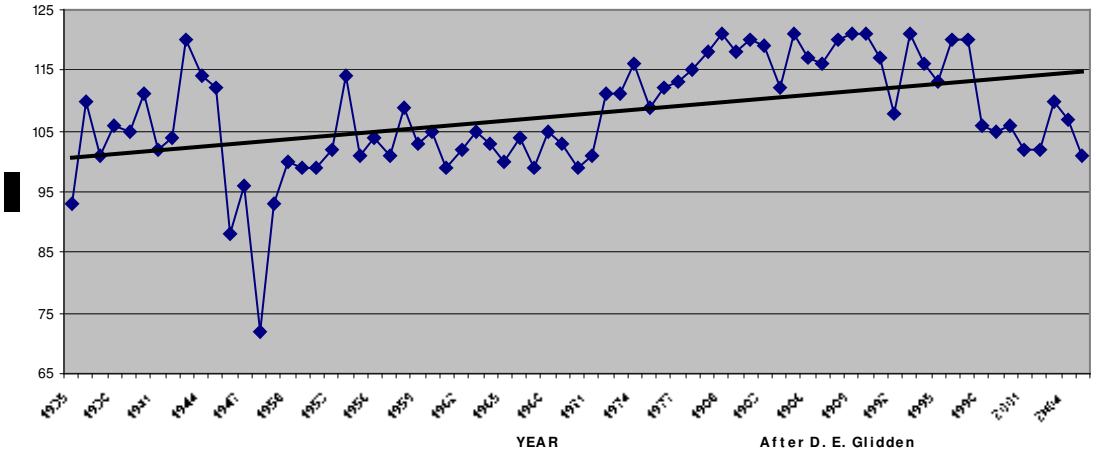
MWO AVERAGE ANNUAL PEAK GUST WIND DIRECTION 1980-2005
AVERAGE = 277.8 DEGREES
(OBSERVATORY MOVED TO NEW BUILDING IN 1980)



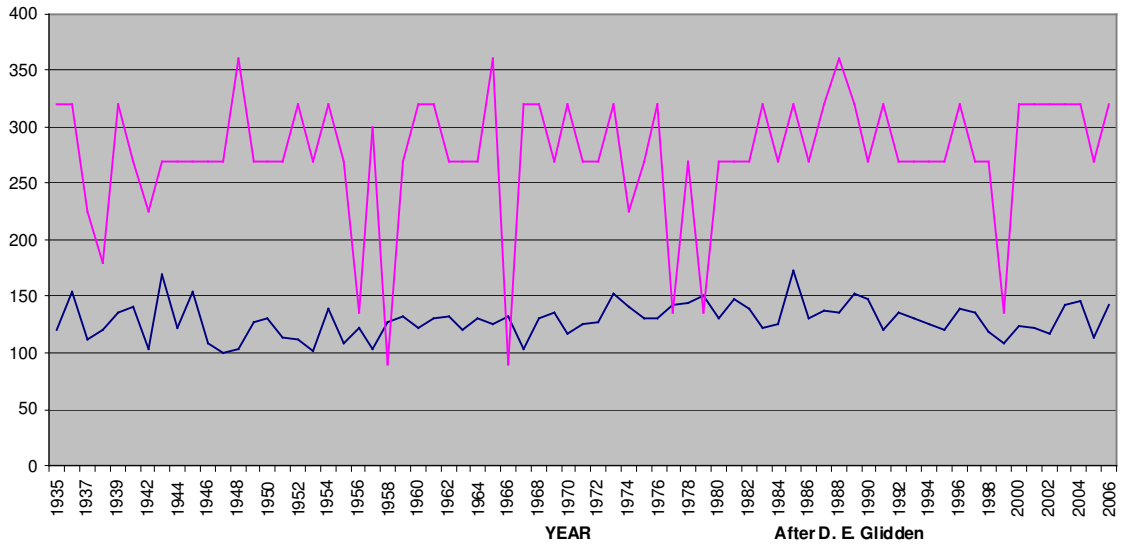
MWO AVERAGE ANNUAL PEAK GUST WIND DIRECTION 1954-1979
AVERAGE = 251.6 DEGREES
(OBSERVATORY MOVED TO NEW BUILDING IN 1980)



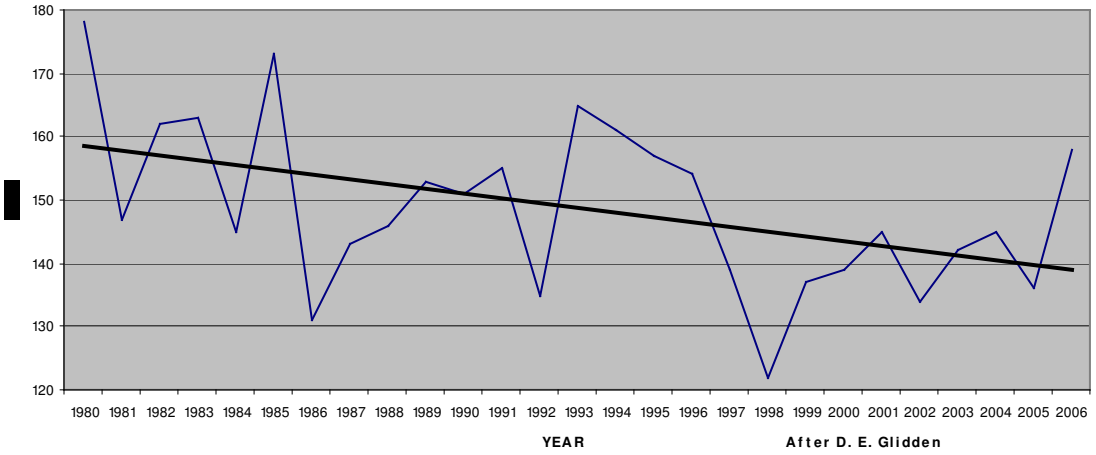
MWO ANNUAL PEAK GUST AVERAGE 1935-2005
(Record Average PG = 107 MPH)
1954-79 AVERAGE (106.2) VS. 1980-2006 AVERAGE (113.8) = +7.6 CHANGE



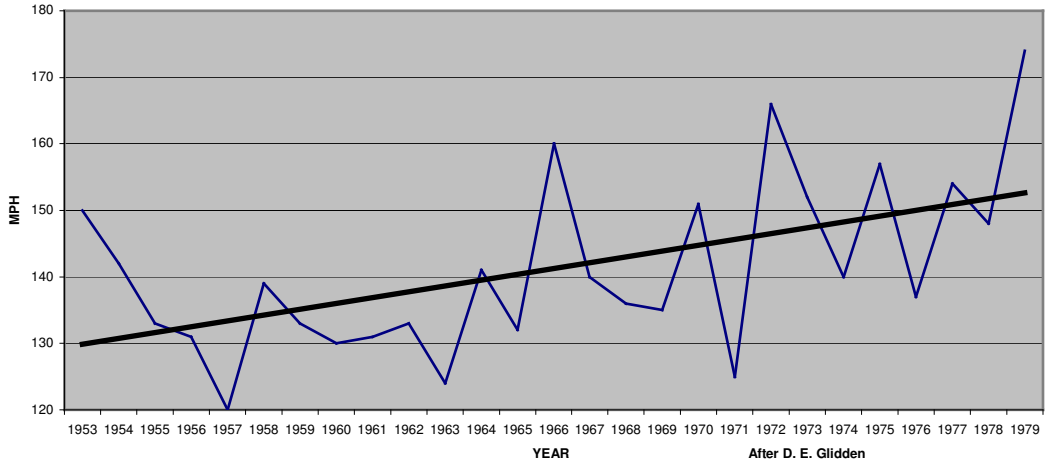
MWO JANUARY PEAK GUSTS AND DIRECTIONS 1935-2006
1954-79 = 5 PEAK GUSTS FROM 45-135 DEGREES
1980-2006 = 1 PEAK GUST FROM 45-135 DEGREES



MWO PEAK GUST MAXIMA 1980-2006
1953-79 AVERAGE (141.3) VS. 1980-2006 AVERAGE (148.7) = 7.4 MPH CHANGE



MWO PEAK GUST MAXIMA 1953-1979
AVERAGE = 141.3 MPH



MWO AVERAGE PEAK GUST WIND DIRECTIONS FOR VARIOUS PERIODS, WINTER (DJF)
(OBSERVATORY MOVED TO NEW BUILDING IN 1980)