



[Newsroom](#) »

## Mount Washington World Record Wind Toppled

MOUNT WASHINGTON, NH – For nearly sixty-two years, Mount Washington, New Hampshire held the world record for the fastest wind gust ever recorded on the surface of the Earth. In a report released Friday by the World Meteorological Organization (WMO), that record was toppled in 1996 at Barrow Island, Australia during Typhoon Olivia. According to the report, the new record stands at 253 mph.

News of the new world record was released by a WMO Evaluation Panel of experts in charge of global weather and climate extremes within the WMO Commission for Climatology (CCI). The panel was led by Dr. Randy Cerveny of Arizona State University and CCI Rapporteur of Climate Extremes.

“It was bound to happen, but it’s definitely quite a shock to hear that news,” says Scot Henley, Executive Director of the Mount Washington Observatory. “While we are disappointed that it appears that Mount Washington may have been bumped from the top, at our core we are all weather fans and we are very impressed with the magnitude of that typhoon and the work of the committee that studied it.”

Mount Washington’s famous wind gust of 231 mph, recorded on April 12, 1934 at the Mount Washington Observatory, stands as the record for the fastest surface wind measured in the Northern and Western Hemispheres.

“It’s natural to treat news like this with some level of skepticism,” said Henley. “Dr. Cerveny was kind enough to share the panel’s findings in advance of next month’s WMO meeting in Turkey. We’re going to spend some time reviewing the materials to learn more about the instrumentation, calibration, the methods used to calculate the wind speed and everything else that went into their investigation.”

“The new record does not diminish the fact that Mount Washington is one of the fiercest places on the planet,” says Ken Rancourt, Mount Washington Observatory’s Director of Summit Operations. “It remains consistently one of the windiest places on Earth and a location that begs further study of wind, weather and climate.”

“Work continues atop Mount Washington,” says Henley. “Our crew of meteorologists and educators at the Observatory stands ready to measure and study the next big wind, whenever it may come.”

Mount Washington Observatory, which operates within the 59-acre Mt. Washington State Park, is a private, non-profit, membership-supported organization. Since 1932, the Observatory has been monitoring the elements in one of the most extreme locations on Earth, using this unique site for scientific research and educational outreach.

<http://www.mountwashington.org/news/release.php?id=49>

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Like many Mount Washington Observatory fans, we were surprised to learn this news. While we certainly respect the work of the WMO evaluation panel and acknowledge its findings, it is natural to treat such news with a certain level of skepticism. We have received the supporting documentation and are eager to learn more about the group's findings.

Mount Washington's 231 mph wind gust remains the fastest surface wind ever observed in the Western and Northern Hemispheres and the fastest wind ever observed at a manned surface station. Mount Washington's bitter cold, freezing fog, heavy snow and legendary wind have contributed to its reputation as being one of the planet's most extreme places, the "Home of the World's Worst Weather".

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### **Frequently Asked Questions**

*1) Why did it take 14 years to recognize this record?*

Our understanding is that the record was noted by the Barrow Island station when it occurred, but not publicized until the WMO Evaluation Panel stumbled upon it while conducting a review of world records.

*2) The new record occurred at an unmanned station. Do they really know it happened?*

Yes. The WMO Evaluation Panel has conducted significant research into the circumstances surrounding this event, and while it is rare for winds of this speed to be verified since instruments typically fail, the instrument used at Barrow Island was confirmed to be in good working order.

*3) The new record occurred during a typhoon. Does that really count?*

Yes.

### **Resources for More Information**

If you find additional resources that you feel we should post, please email them to [information@mountwashington.org](mailto:information@mountwashington.org).

*Information from the WMO:*

<http://wmo.asu.edu/world-maximum-surface-wind-gust>

<http://wmo.asu.edu/>

*Mount Washington Observatory press release:*

<http://www.mountwashington.org/news/release.php?id=49>

*News coverage:*

<http://news.google.com/news/story?ncl=http://abcnews.go.com/US/wireStory%3Fid%3D9668006&hl=en>

*Blog coverage:*

<http://www.weathernewengland.com/matt-noyes/mount-washington-dethroned/1006527.html>

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3-17-2010- Email From Mount Washington Observatory To MWO Members

### **World Record Wind Update**

As you know, the World Meteorological Organization (WMO) recently announced that our 231 mph wind record was broken during a tropical storm in Australia in 1996. After careful review of the report, Observatory officials have contacted the WMO and respectfully asked them to consider classifying the Australian record differently due to the fact that it was recorded during a typhoon. We'll let you know if anything develops!

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## **World Meteorological Organization**

### ***World Weather/Climate Extremes Website***

#### **World: Maximum Surface Wind Gust (3-Second)**

<b>Record Value</b>	113.2 m/s (253 mph; 220 kt)
<b>Date of Record (DMY)</b>	1055 UTC 10/4/1996
<b>Length of Record</b>	1932-present
<b>Instrumentation</b>	heavy duty three-cup Synchrotac anemometer
<b>Geospatial Location</b>	Barrow Island Australia [20°40'S, 115°23'E, elevation: 64m (210ft)]

## References

WMO Evaluation Panel of experts in charge of global weather and climate extremes within the WMO Commission for Climatology (CCI) consisted of the following experts: Dr Pierre Bessemoulin, MeteoFrance and President of CCI; Dr Tom Peterson, NOAA National Climatic Data Center; Dr Blair Trewin, Australian Bureau of Meteorology; Dr Jose M. Rubiera Torres, Cuban Instituto de Meteorología; Dr John (Jack) Beven, USA National Hurricane Center; Dr John King, British Antarctic Survey; Dr Randy Cerveny, Arizona State University and CCI Rapporteur of Climate Extremes.

## Discussion

In "A review of extreme wind gusts at Barrow Island during Tropical Cyclone Olivia, 10 April 1996" by Joe Courtney and Steve Buchan: "The Barrow Island anemometer was a heavy duty three-cup Synchrotac anemometer positioned 10 m above ground level and 64 m above sea level, mounted on a mast as shown in Figs. 3 and 4. The mast was a cyclone-rated Hills telescoping 10m tower comprising 2 x 4.5m sections with a 1m mast extension. Each section was guyed with 3 x 6mm stainless steel wires.

The instrument was sited towards the centre of the island about 4 km from the coast to the southeast and about 7 km inland from the south southwest, the direction of the strongest wind gusts. The instrument is well exposed in all directions, the site is slightly elevated above the surrounding reasonably level terrain and the vegetation is very low.

The instrument was in good working order and was regularly inspected with comparisons made against a hand-held anemometer. The instrument was owned by WAPET, which has since been transferred to Chevron. Maintenance was performed by WNI Science and Engineering (now known as MetOcean Engineers). Synoptic data was ingested into the Bureau of Meteorology system for forecasting and climate applications.

The peak wind gust measurement was one of five extreme gusts during a series of 5-min time periods. Gusts of 199, 220 and 202 knots (369, 408, 374 km/h) were measured followed by a series of four lower values (minimum of 114 knots (211 km/h)) which were then followed by two more extreme gusts of 187 and 161 knots (347 and 298 km/h) in the 5-min time intervals. The elapsed time between gust maxima was 30 min, representing a scale of 8 nm (15 km) compared to the eye diameter of 40 nm (75 km). The 5-min average winds showed maxima and a minimum at the same time periods as the gusts. The pattern and scales suggests that a mesovortex was imbedded in the already strong eyewall mean winds (5-min mean maximum wind = 95 knots (176 km/h)). The extreme gusts represented extreme gust factors of 2.27-2.75, nearly twice the average gust factor throughout the storm of 1.33. This clearly suggests that some process other than mechanical turbulence is important during this period.

**Previous record: 231 mph (372 km/h) at Mt. Washington, New Hampshire, USA**

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