

Hi Joe (and all),

The NCEP-OPC North Pacific unified surface analysis with plotted data for 0600 UTC 8 Nov 2014 is attached. What impresses me, in addition to the depth of the storm, is that the region of cyclonic circulation spans the entire North Pacific. Not bad for a 2+ bergeron storm.

That ships now routinely get out of the way of these ocean-spanning big storms is indeed testimony to the capabilities of modern NWP. It is impossible to overstate the importance of this achievement, which benefits society across the board, in any evaluation of "then and now."

An irony of ships now routinely getting out of the way of extratropical and tropical cyclones because the forecasts have gotten so much better days in advance is that surface observations are "lost" in many parts of the storm. The unexpected development of TC Diana (1984) by the tropical transition (TT) process east of Florida in September 1984 provided a wealth of ship observations that were critical to documenting, analyzing, and understanding the TT process (see Bosart and Bartlo 1991; [http://dx.doi.org/10.1175/1520-0493\(1991\)119<1979:TSFIAB>2.0.CO;2](http://dx.doi.org/10.1175/1520-0493(1991)119<1979:TSFIAB>2.0.CO;2)). Today, the model forecasts are so good for most of these events that researchers have ready-made four-dimensional datasets that can be mined for a wide variety of research and operational investigations.

Lance

On 8 Nov, 2014, at 15:16, Jim Steenburgh <[jim.steenburgh@utah.edu](mailto:jim.steenburgh@utah.edu)> wrote:

Attached is the OPC analysis for 6z showing an analyzed central pressure of 924 mb. Let the record-breaking debate begin!

Once again, I am amazed at how far NWP has come during my scientific lifetime that we can reliably predict many/most of these storms days in advance, the occasional model overdeepening notwithstanding.

Jim

On 11/6/14 6:37 PM, David Roth - NOAA Federal wrote:  
This list of central pressures from deep extratropical cyclones ( $\leq 940$  hPa) has been created from Chris Burt's (of the UK and Weather Underground) work (about 1/4 of the list), John Gyakum's Pacific contribution to the extratropical database (about 1/6), lowest known SLPs across the continental United States (one), and Mariners Weather Log (the remainder). It is far from complete, is still being updated, and will likely act as the kernel for metadata related to the slowly developing significant extratropical cyclone database. This list, much like the extratropical cyclone database and related SLP records for the lower 48 and Alaska, continues to be under development, but per a book I remember being required to read in early elementary school, it is "Something To Start With". :)

If you know of others which are missing, let me know. I have no problems with crowdsourcing any portion of this effort. There's a lot to do.

#### North Atlantic

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914 mb (26.99") on Jan 10, 1993: NE Atlantic. (NMC analyzed down to 900 mb)

916 mb (27.05") on Dec 15, 1986: 920.2 mb (27.17") measured by the ship Uyr

southeast of Greenland. The British Met. Office calculated that the

central pressure of the storm was 916 mb (27.05"). NMC analyzed it

down to 900 mb (26.57")

918 mb (27.11") on Jan 6-7, 1839: West coast of Ireland

920 mb (27.17") on Feb 2, 1995 @ 06z: offshore (to the southeast) of Cape

Farewell, Greenland.

921.1 mb (27.20") on Feb 5, 1870: ship Neier at 49N 26W (another ship in the

area measured 925.5 mb)

922 mb (27.24") on Jan 15, 1999 @ 21z: south of Iceland (P3BK4 ship report of

928 mb and 60 kt winds)

923.6 mb (27.27") on Dec 2, 1929: the Iceland low sea level pressure record was

set at Storhofoi. 925.5 mb reading taken by the SS Westpool on the 4th

may be from the same system.

924 mb (27.28") on Feb 4, 1824 at Reykjavik, Iceland (the lowest on land measured pressure in the North Atlantic)

924 mb (27.28") on Mar 8, 2003 in the NE Atlantic

925.5 mb (27.33") on Dec 4, 1929 by the SS Westpool somewhere in the Atlantic

925.6 mb (27.33") on Jan 26, 1884: Ochtertyre, Perthshire, U.K. (the lowest

pressure recorded on land in the U.K.)

926 mb (27.34") on Oct 29, 1989: between Greenland and Iceland. Quoted at

932 mb 10/30/1989 00z in MWL.

927.2 mb (27.38") on Dec. 8, 1886: Belfast, Ireland

<928 mb (<27.40") on Jan 3, 1933: west of Iceland

928 mb (27.40") on Dec 18-20, 1982: near Weather Ship L

929 mb (27.43") on Dec 31, 1999 @ 00z: 61N 39W

930 mb (27.46") on Dec 24, 1989 @ 12z: southwest of Iceland

930 mb (27.46") on Jan 26, 2013: offshore eastern Greenland per OPC and 932

mb UK MetOffice

932 mb (27.52") on Jan 16, 1988 @ 00z: 62N 52W

932 mb (27.52") on Nov 29, 1992 @ 12z: 61N 37W

933 mb (27.55") on Jan 8, 1990 @ 15z: downstream of Denmark Strait

933 mb (27.55") on Dec 30, 1997 @ 12z: Iceland

934 mb (27.58") on Dec 26, 1990 @ 12z: Denmark Strait

936 mb (27.64") on Mar 8, 1989 @ 06z: Far north Atlantic

938 mb (27.70") on Jan 28, 1985 @ 12z: 54N 51W

938 mb (27.70") on Dec 20, 1993 @ 00z: east/northeast of Iceland

938 mb (27.70") on Mar 22, 1994 @ 12z: west coast of Iceland

938 mb (27.70") on Dec 25, 1999 @ 13z: 61N 2E

939 mb (27.73") on Nov 26, 1988 @ 06z: 50N 45W (post-TC Keith)

939 mb (27.73") on Jan 8, 1990 @ 12z: northwest Atlantic

939.7 mb (27.75") on Mar 1, 1990: Finnish low sea-level pressure record.

940.2 mb (27.76") on Jan 20, 1977: St. Anthony, NF -- record low SLP for Canada

## North Pacific

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925 mb (27.32") on Oct 26, 1977 @ 00z: 56N 169W/Dutch Harbor AK Analyzed

as 933 mb on NMC NH maps

926 mb (27.34") on Dec 24, 1975 @ 12z: 49N 158W

928 mb (27.40") on Dec 21, 1981 @ 12z: 52N 174E  
932 mb (27.52") on Jan 15, 2013 @ 06z: 41N 159E  
934 mb (27.58") on Dec 14, 1984 @ 12z: 56.5N 169E  
934 mb (27.58") on Dec 7, 1976 @ 12z: 47N 177.5E  
936 mb (27.64") on Oct 3, 1981 @ 12z: 47.5N 154E  
937 mb (27.70") on Dec 27, 1997 @ 06z: Gulf of Alaska  
938 mb (27.70") on Nov 10, 1976 @ 12z: 46N 179W  
938 mb (27.70") on Jan 20, 1988 @ 12z: 45N 180  
938 mb (27.70") on Feb 22, 1998 @ 18z: 57N 176E  
940 mb (27.76") on Jan 7, 1985 @ 12z: 52N 175W  
940 mb (27.76") on Oct 26, 1998 @ 00z: Near Int'l Dateline  
940 mb (27.76") on Mar 21, 1999 @ 18z: western Aleutians  
940 mb (27.76") on Nov 18, 1999 @ 00z: central Bering sea

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David Mark Roth  
Weather Forecaster