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National Weather Service


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OBS

Observation(s)

OBSC

Obscure

Obscuration

Any atmospheric phenomenon, except clouds, that restricts vertical visibility (e.g., dust, rain, snow, etc.).

Obscuring Phenomena

Any atmospheric phenomenon, except clouds, that restricts vertical visibility (e.g., dust, rain, snow, etc.).

Observation Well

In hydrologic terms, a non-pumping well used for observing the elevation of the water table or piezometric surface

Occluded Front

A composite of two fronts, formed as a cold front overtakes a warm or quasi-stationary front. Two types of occlusions can form depending on the relative coldness of the air behind the cold front to the air ahead of the warm or stationary front. A cold occlusion results when the coldest air is behind the cold front and a warm occlusion results when the coldest air is ahead of the warm front.

Occluded Mesocyclone

A mesocyclone in which air from the rear-flank downdraft has completely enveloped the circulation at low levels, cutting off the inflow of warm unstable low-level air.

Oceanography

The study of the ocean, embracing and integrating all knowledge pertaining to the ocean's physical boundaries, the chemistry and physics of sea water, and marine biology.

OCFNT

Occluded Front - a composite of two fronts, formed as a cold front overtakes a warm or quasi-stationary front. Two types of occlusions can form depending on the relative coldness of the air behind the cold front to the air ahead of the warm or stationary front. A cold occlusion results when the coldest air is behind the cold front and a warm occlusion results when the coldest air is ahead of the warm front.

OCNL

Occasional

OEODM

The Office of Equal Opportunity and Diversity Management. Provides a dual role. Advises and assists the Assistant Administrator in carrying out the National Weather Service's (NWS) responsibilities relative to Civil Rights laws, Executive Orders, regulatory guidelines, and other nondiscrimination laws within the Federal Government. Advises and assists the Assistant Administrator in carrying out the NWS policy of diversity management by fostering an inclusive workforce, building an environment that respects the individual and offering opportunities for all employees to develop to their full potential. Cultural Diversity is the mixture of differences and similarities each employee brings to the workplace to accomplish the goals of the NWS.

Office of Global Programs

The Office of Global Programs (OGP) sponsors focused scientific research, within approximately eleven research elements, aimed at understanding climate variability and its predictability. Through studies in these areas, researchers coordinate activities that jointly contribute to improved predictions and assessments of climate variability over a continuum of timescales from season to season, year to year, and over the course of a decade and beyond.

Offshore Breeze

A wind that blows from the land towards a body of water. Also known as a land breeze.

Offshore Flow

Occurs when air moves from land to sea, and is usually associated with dry weather.

Offshore Waters

That portion of the oceans, gulfs, and seas beyond the coastal waters extending to a specified distance from the coastline, to a specified depth contour, or covering an area defined by specific latitude and longitude points.

Offshore Waters Forecast

(OFF) - A National Weather Service marine forecast product for that portion of the oceans, gulfs, and seas beyond the coastal waters extending to a specified distance from the coastline, to a specified depth contour, or covering an area defined by specific latitude and longitude points.

OFSHR

Offshore

OH

State of Ohio National Weather Service Office of Hydrology, a branch of the NWS Headquarters

OHD

Overhead

Okta

Used for the measurement of total cloud cover. One okta of cloud cover is the equivalent of 1/8 of the sky covered with cloud.

OLR

Outgoing Longwave Radiation

Omega

A term used to describe vertical motion in the atmosphere. The "omega equation" used in numerical weather models is composed of two terms, the "differential vorticity advection" term and the "thickness advection" term. Put more simply, omega is determined by the amount of spin (or large scale rotation) and warm (or cold) advection present in the atmosphere. On a weather forecast chart, high values of omega (or a strong omega field) relate to upward vertical motion (UVV) in the atmosphere. If this upward vertical motion is strong enough and in a sufficiently moist airmass, precipitation results.

Omega High

A warm high aloft which has become displaced and is on the polarward side of the jet stream. It frequently occurs in the late winter and early spring in the Northern Hemisphere. The name comes from its resemblance to the Greek letter, Omega, when analyzed on upper air charts. It is an example of a blocking high.

Onshore Breeze

A wind that blows from a body of water towards the land. Also known as a seabreeze

Onshore Flow

Occurs when air moves from sea to land, and is usually associated with increased moisture.

Opaque

A condition where a material, such as a cloud, blocks the passage of radiant energy, especially light. Opaque sky cover refers to the amount of sky cover that completely hides all that might be above it.

OPC

Ocean Prediction Center (Formally the Marine Prediction Center. An NCEP center which produces marine forecasts north of 30oN.

Open Lakes Forecast

(GLF) - A National Weather Service marine forecast product for the U.S. waters within a Great Lake not including the waters covered by an existing Nearshore Waters Forecast (NSH). When the seasonal Nearshore forecast is not issued, the Open Lake forecast includes a forecast of nearshore waters.

Operational Products

A product that has been fully tested and evaluated and is produced on a regular and ongoing basis.

Orifice

In hydrologic terms,

(1) An opening with closed perimeter, usually sharp edged, and of regular form in a plate, wall, or partition through which water may flow, generally used for the purpose of measurement or control of water.

(2) The end of a small tube, such as a Pitot tube, piezometer, etc.

ORIG

Original

Orographic

Related to, or caused by, physical geography (such as mountains or sloping terrain).

Orographic Lifting

Same as **Upslope Flow**; occurs when air is forced to rise and cool due to terrain features such as hills or mountains. If the cooling is sufficient, water vapor condenses into clouds. Additional cooling results in rain or snow. It can cause extensive cloudiness and increased amounts of precipitation in higher terrain.

Orographic Precipitation

- Precipitation which is caused by hills or mountain ranges deflecting the moisture-laden air masses upward, causing them to cool and precipitate their moisture.
- Orographic Uplift**
Same as **Orographic Lifting**; occurs when air is forced to rise and cool due to terrain features such as hills or mountains. If the cooling is sufficient, water vapor condenses into clouds. Additional cooling results in rain or snow. It can cause extensive cloudiness and increased amounts of precipitation in higher terrain.
- Orographic Waves**
A wavelike airflow produced over and in the lee of a mountain barrier.
- Orphan Anvil**
Slang for an anvil from a dissipated thunderstorm, below which no other clouds remain.
- Oscillation**
A shift in position of various high and low pressure systems that in climate terms is usually defined as an index (i.e., a single numerically-derived number, that represents the distribution of temperature and pressure over a wide ocean area, such as the El Niño-Southern Oscillation, North Atlantic Oscillation, and Pacific Decadal Oscillation).
- OTLK**
Outlook
- OTR**
Other
- OTRW**
Otherwise
- Outer Convective Band**
Bands in a hurricane that occur in advance of main rain shield and up to 300 miles from the eye of the hurricane. The typical hurricane has two or three bands (and sometimes more) which are comprised of cells resembling ordinary thunderstorms. Wind gusts are usually higher in these bands than in the Pre-Hurricane Squall Line.
- Outflow**
Air that flows outward from a thunderstorm.
- Outflow Boundary**
A storm-scale or mesoscale boundary separating thunderstorm-cooled air (outflow) from the surrounding air; similar in effect to a cold front, with passage marked by a wind shift and usually a drop in temperature. Outflow boundaries may persist for 24 hours or more after the thunderstorms that generated them dissipate, and may travel hundreds of miles from their area of origin.
- New thunderstorms often develop along outflow boundaries, especially near the point of intersection with another boundary (cold front, dry line, another outflow boundary, etc.; see triple point).
- Outflow Channel**
In hydrologic terms, a natural stream channel which transports reservoir releases.
- Outgoing Longwave Radiation**
Outgoing Longwave Radiation is a polar satellite derived measurement of the radiative character of energy radiated from the warmer earth surface to cooler space. This measurement provides information on cloud-top temperature which can be used to estimate tropical precipitation amounts which is important in forecasting weather and climate.
- Outlet**
In hydrologic terms, an opening through which water can be freely discharged from a reservoir.
- Outlet Discharge Structure**
In hydrologic terms, protects the downstream end of the outlet pipe from erosion and is often designed to slow down the velocity of released water to prevent erosion of the stream channel
- Outlook**
An outlook is used to indicate that a hazardous weather or hydrologic event may develop. It is intended to provide information to those who need considerable lead time to prepare for the event.
- Outlook**
A broad discussion of the weather pattern expected across any given area, generally confined to forecast periods beyond 48 hours.
- OVC**
Overcast- An official sky cover classification for aviation weather observations, when the sky is completely covered by an obscuring phenomenon. This is applied only when obscuring phenomenon aloft are present--that is, not when obscuring phenomenon are surface-based, such as fog
- Overcast**
(Abbrev. OVC)- An official sky cover classification for aviation weather observations, when the sky is completely covered by an obscuring phenomenon. This is applied only when obscuring phenomenon aloft are present--that is, not when obscuring

phenomenon are surface-based, such as fog.

Overhang

Radar term indicating a region of high reflectivity at middle and upper levels above an area of weak reflectivity at low levels. (The latter area is known as a weak-echo region, or WER.) The overhang is found on the inflow side of a thunderstorm (normally the south or southeast side).

Overland Flow

In hydrologic terms, the flow of rainwater or snowmelt over the land surface toward stream channels. After it enters a watercourse it becomes runoff.

Overrunning

A weather pattern in which a relatively warm air mass is in motion above another air mass of greater density at the surface. Embedded thunderstorms sometimes develop in such a pattern; severe thunderstorms (mainly with large hail) can occur, but tornadoes are unlikely.

Overrunning often is applied to the case of warm air riding up over a retreating layer of colder air, as along the sloping surface of a warm front. Such use of the term technically is incorrect, but in general it refers to a pattern characterized by widespread clouds and steady precipitation on the cool side of a front or other boundary.

Overshooting Top

(or Penetrating Top) - A dome-like protrusion above a thunderstorm anvil, representing a very strong updraft and hence a higher potential for severe weather with that storm. A persistent and/or large overshooting top (anvil dome) often is present on a supercell.

A short-lived overshooting top, or one that forms and dissipates in cycles, may indicate the presence of a pulse storm.

OVNGT

Overnight

OVR

Over

OVRN

Overrun

OVRNGT

Overnight

Ozone

A form of oxygen, O₃. A powerful oxidizing agent that is considered a pollutant in the lower troposphere but an essential chemical in the stratosphere where it protects the earth from high-energy ultraviolet radiation from the sun.

Ozone Action Day

A "heads-up" message issued by the Department of Natural Resources (DNR) through the National Weather Service when ozone levels may reach dangerous levels the next day. This message encourages residents to prevent air pollution by postponing the use of lawn mowing, motor vehicles, boats, as well as filling their vehicle gas tanks.

Ozone Advisory

It is issued by the Department of Natural Resources (DNR) through the National Weather Service when ozone levels reach 100. Ozone levels above 100 are unhealthy for people with heat and/or respiratory ailments.

Ozone Hole

A severe depletion of stratospheric ozone over Antarctica that occurs each spring. The possibility exists that a hole could form over the Arctic as well. The depletion is caused by a chemical reaction involving ozone and chlorine, primarily from human produced sources, cloud particles, and low temperatures.

Ozone Layer

An atmospheric layer that contains a high proportion of oxygen that exists as ozone. It acts as a filtering mechanism against incoming ultraviolet radiation. It is located between the troposphere and the stratosphere, around 9.5 to 12.5 miles (15 to 20 kilometers) above the earth's surface.

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