

Defense Meteorological Satellite Program - DMSP

LEO, Polar Orbiting Satellites

6 satellites in orbit

Wind Direction

Average direction from which wind is blowing

Air Mass

Body of Air over a Large Area

Takes on characteristics of the Underlying Surface

Temperature and Moisture Characteristics are the Same

Tropical Depression

An organized system of clouds and thunderstorms with a defined, closed surface circulation and maximum sustained winds of less than 34 knots

Ocean Eddies

Independent circulations of cold or warm water

Generally found on either side of strong currents such as the Gulf Stream or Kuroshio

Used tactically by submarines because of the sound propagation differences that exist inside and outside the eddie circulations

Wave Height

The vertical distance from the crest of a wave to the trough of the wave

Flood

The current that flows toward the shore with a rising tide

3 Types of Currents

Open Ocean

Littoral

Rip

Spilling Breaker

Occur w/ Gentle Flat Beaches

Plunging Breaker

Occur w/ Moderate to Steep sloping Beaches

Four Major Ocean Sediments

Terrigenous

Pelagic

Glacial Marine

Volcanic

Pressure

Sound Speed increases 2 feet/second for every increase in depth of 100 feet

Dominant controller of speed below 1000 feet in the ocean

Small Craft Warning

Winds Sustained at 18-33 knots

Forecasted for harbors and inland waters

Tropical Cyclone Conditions of Readiness - TCCOR

TCCOR 5 - Destructive winds are possible within 96 hours

TCCOR 4 - Destructive winds are possible within 72 hours

TCCOR 3 - Destructive winds are possible within 48 hours

TCCOR 2 - Destructive winds are anticipated within 24 hours

TCCOR 1 - Destructive winds are occurring or anticipated within 12 hours

Geostationary Operational Ent'l Satellites - GOES

24/7 Coverage over the same Geographic Region

Monitors weather systems and storms

4 GOES Satellites in Orbit

Relative Humidity

Percentage of the amount of water in the air compared to how much water can actually be held based on temperature & pressure

Warm Front

Replaces Colder Air

Tropical Storm

A distinct rotation must exist around the central area of low pressure and wind speeds must be between 34 and 63 knots. At this point the tropical storm is given a name.

Cold Eddy

Cold Eddies form on the south side of the Gulf Stream and maintain a counterclockwise circulation

Bioluminescence

The types are sheet, spark, and glowing ball.

Most bioluminescence in the oceans is sheet-type

Spark-type displays are created by large numbers of crustaceans

Glowing ball displays are seen most frequently in warmer waters. Luminescent jellyfish cause many glowing-ball displays

Littoral Longshore Currents

Caused by Waves Approaching the Beach at an Angle

Increase Velocity with Increased Breaker Heights

Steep Beaches have stronger currents



By weatherman22

Published 5th April, 2015.

Last updated 6th April, 2015.

Page 1 of 3.

Sponsored by CrosswordCheats.com

Learn to solve cryptic crosswords!

<http://crosswordcheats.com>

Surging Breaker

Occur w/ Very Steep Sloping Beaches and are dangerous for Landing Craft

3 Thermal Layers of the Ocean

Mixed/Surface Layer

Thermocline

Deep Layer

Salinity

Sound Speed increases 4 feet/second for every increase in salinity of 1ppt

Effects are greatest for Ocean water in areas of high evaporation and high influxes of fresh water

Gale Warning

Winds Sustained at 34-47 knots

Forecasted for harbors, inland waters, ocean areas, installations, and air fields

the Nautical Almanac

Contains the following data tabulated at hourly intervals to a precision of 0.1 arc minute: the Greenwich hour angle and declination of the Sun, Moon, and navigational planets; the Greenwich hour angle of Aries; positions of the navigational stars; rise and set times of the Sun and Moon for a range of latitudes

Polar Operational Ent'l Satellites - POES

A.K.A. TIROS-N Satellites

Collects Data Globally

There are 6 POES Satellites in orbit

Wind Speed

Average rate of air motion

Measured in nautical miles/hour or Knots

Cold Front

Displaces Warm Air at the Surface

Restricted Visibility

Prevailing Visibility falls below 7 Nautical Miles or 10 Statute Miles

Hurricane/Typhoon

Wind speeds must be at least 64 knots

Warm Eddy

Warm Eddies form on the north side of the Gulf Stream and drift into the colder waters of the Labrador Current maintaining their clockwise rotation

Sea Waves

Also known as wind waves, are waves generated by the wind in the local area

Wave Period

The time it takes for a complete wave cycle (crest to crest or trough to trough) to pass a given point

Open Ocean Currents

Major Currents like the Gulf Stream and Kuroshio

3 Breaker Types

Spilling

Plunging

Surging

Ocean Fronts

Interface btwn 2 Water Masses of Different Temperatures and Salinities

Mixed/Surface Layer

Isothermal Temperature with Depth

From the ocean surface to about 1500 feet

Temperature

Primary Controller of Sound Speed in the top 1000 feet of the ocean

Sound Speed increases 6 feet/second for an increase in 1 degree centigrade

Storm Warning

Winds Sustained at 48 knots and greater

Forecasted for harbors, inland waters, ocean areas, installations and airfields

the Astronomical Almanac

Contains precise ephemerides of the Sun, Moon, planets, and satellites, data for eclipses and other astronomical phenomena for a given year

Nat'l Polar Orbiting Ent'l Satellite System-NPOESS

Will Replace the POES and DMSP

Tropical Rainfall Measuring Mission-TRMM

Joint venture btwn NASA and Japanese Nat'l Space Development Agency

Research the water cycle in the atmosphere

Fronts

Transitions between two Air Masses

Fog

Suspension of small water droplets or ice crystals in the air that reduces visibility at the surface

Thunderstorms - TS

Formed when cumulous clouds grow into cumulonimbus clouds



By weatherman22

Published 5th April, 2015.

Last updated 6th April, 2015.

Page 2 of 3.

Sponsored by CrosswordCheats.com

Learn to solve cryptic crosswords!

<http://crosswordcheats.com>

Bathythermograph - BT

The measurement and recording of subsurface water temperature at various depths

BT data is the critical factor in determining the sound velocity profile (SVP) of a particular ocean area

Swell Waves

Waves that have moved away from the area in which they were formed

Ebb

The current that flows away from the shore with a falling tide

Rip Currents

NOT Associated w/ Tides

Caused by return flow of water from the beach

Form at the end of a beach where land juts out into the water

5 Major Ocean Provinces

Continental Shelf

Continental Slope

Continental Rise

Ocean Basins

Mid-Ocean Ridges

Thermocline

Describe by its rapid decrease in temperature with depth from the layer above it

METOC & GEOINT

METOC data is a layer of Geospatial Intelligence and is critical to planning and operations in the joint environment

Severe Thunderstorm Warning

TS are w/in 10NM or an hour away

Gusts of 50 kts or Greater = 3/4" Hail and/or Tornadoes



By **weatherman22**

cheatography.com/weatherman22/

Published 5th April, 2015.

Last updated 6th April, 2015.

Page 3 of 3.

Sponsored by **CrosswordCheats.com**

Learn to solve cryptic crosswords!

<http://crosswordcheats.com>