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Regional Performance Objective MET

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REGIONAL OFFICER

AERONAUTICAL METEOROLOGY AND ENVIRONMENT

State National Air Navigation Plan (ANP) Development Workshop & First
NAM/CAR Air Navigation Implementation Working Group (ANI/WG) Aviation
System Block Upgrades (ASBU) Task Force (TF) Meeting (ASBU/TF/1)
Mexico City, Mexico, March 12-15, 2018)





✈️ AGENDA



WAFS



IAVW



Tropical cyclone watch



Aerodrome warnings



Wind shear warnings and alerts



SIGMET and OPMET



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WAFS

world area forecast system

- ✈ provide aeronautical meteorological en-route forecasts in uniform standardized formats:

(global gridded forecasts of upper wind, upper-air temperature and humidity, geopotential altitude of flight levels, flight level and temperature of tropopause, direction, speed and flight level of maximum wind, cumulonimbus clouds, icing, and clear-air and in-cloud turbulence)

- ✈ issued 4-times per day, with fixed time validity T+0 to T+36 at 3-hour time-steps
- ✈ global forecasts of significant weather (SIGWX) phenomena in binary code form / issued 4-times per day, with validity at T+24.



WAFS Internet File Service (WIFS)

NOAA NATIONAL WEATHER SERVICE

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Welcome to WIFS

The World Area Forecast System (WAFS) Internet File Service (WIFS) is provided by the United States National Weather Service (NWS) Aviation Weather Center (AWC) as a highly reliable Internet source of meteorological products. The purpose of WIFS is to provide timely delivery of critical aviation-related weather information to support air traffic management and flight operations in over 80 countries, and regional meteorological telecommunications between the United States and nations in the Caribbean and Central America. This service is available to all authorized customers. Once the FAA approves a user state to access the WIFS system, the AWC will issue a user name and password which will be required to access the data. The International Civil Aviation Organization (ICAO), in Amendment 75 to Annex 3, recognizes the use of the Internet to access aviation weather data in support of flight planning. The WIFS provides this capability and serves an important function backing up the International Satellite Communications System (ISCS). The FAA plans to discontinue the satellite service in June of 2012. The WIFS will become the primary service at that time.

Access to the WIFS data requires a user name and password.

[Click Here to Register](#)

[View Frequently Asked Questions \(FAQ\)](#)

[Return to Aviation Weather Center](#)

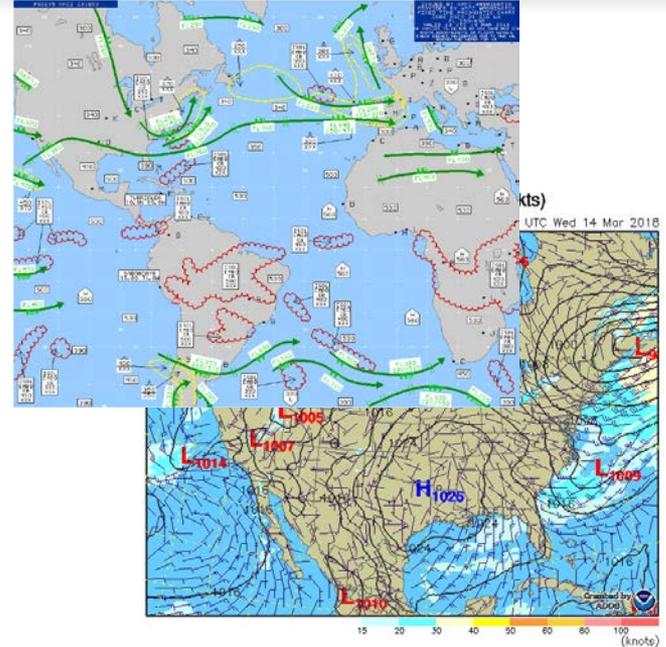
Page loaded: 14:23 UTC | 07:23 AM Pacific | 08:23 AM Mountain | 09:23 AM Central | 10:23 AM Eastern



US Dept of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Centers for Environmental Prediction
Aviation Weather Center
7220 NW 101st Terr., Room 118
Kansas City, MO 64153-2371

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Server: idp-adds3



ADCS temp/wind charts supplement, but do not substitute for, the official winds and temperatures aloft forecast contained in the FB product.



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IAVW

the International Airways Volcano Watch

- ✈ Monitor and provide advisories to MWOs and aircraft operators of volcanic ash in the atmosphere
- ✈ Advisories support the issuance of SIGMET on these events by the respective MWOs
- ✈ Advisory information on volcanic ash is prepared by VAACs (nine designated VAACs – CAR Washington)
- ✈ VAAC Responds to a notification that a volcano has erupted, or is expected to erupt or volcanic ash is reported in its area of responsibility
- ✈ Based on the cooperation of aviation and non-aviation operational units using information derived from observing sources and networks
- ✈ ICAO recognizes the importance of State volcano observatories in their role of providing information on the pre-eruption and eruption of volcanoes.



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IAVW

Current Volcanic Ash Advisory

www.noaa.gov/VAAC/messages.html

NOAA Satellite and Information Service
National Oceanic and Atmospheric Administration (NOAA)

Office of Satellite and Product Operations

SPECIAL MESSAGE:
This NOAA site will no longer provide GOES-East imagery. For access to high-resolution GOES-East imagery from GOES-16, please go to the site: <https://www.sci.gsfc.nasa.gov/GOES/16/index.php>. We apologize for the inconvenience and appreciate your patience.

Current Volcanic Ash Advisories Washington VAAC

The five most recent messages are listed first, followed by an alphabetical listing by volcano name. Where available, graphics are included.

Advisories Last Updated: **Wed Mar 14 13:26:53 UTC 2018**

Most recent five messages, regardless of volcano:

- 14 Mar 2018 - 1325 UTC -- POPOCATEPETL MEXICO
- 14 Mar 2018 - 1250 UTC -- REVEN TADOR ECUADOR -- (JPEG Only) (XML)
- 14 Mar 2018 - 1156 UTC -- FUEGO GUATEMALA -- (JPEG Only) (XML)
- 14 Mar 2018 - 1137 UTC -- FUEGO GUATEMALA
- 14 Mar 2018 - 0736 UTC -- POPOCATEPETL MEXICO -- (JPEG Only) (XML)

FUEGO GUATEMALA:

- 14 Mar 2018 - 1146 UTC - Has JPEG/XML (JPEG Only) (XML)
- 14 Mar 2018 - 1137 UTC
- 13 Mar 2018 - 0225 UTC
- 12 Mar 2018 - 2038 UTC - Has JPEG/XML (JPEG Only) (XML)
- 12 Mar 2018 - 1454 UTC - Has JPEG/XML (JPEG Only) (XML)
- 12 Mar 2018 - 0850 UTC - Has JPEG/XML (JPEG Only) (XML)
- 12 Mar 2018 - 0845 UTC
- 12 Mar 2018 - 0358 UTC
- 11 Mar 2018 - 0005 UTC
- 10 Mar 2018 - 1833 UTC - Has JPEG/XML (JPEG Only) (XML)
- 10 Mar 2018 - 1256 UTC - Has JPEG/XML (JPEG Only) (XML)
- 10 Mar 2018 - 0755 UTC - Has JPEG/XML (JPEG Only) (XML)
- 10 Mar 2018 - 0735 UTC - Has JPEG/XML (JPEG Only) (XML)
- 10 Mar 2018 - 0122 UTC - Has JPEG/XML (JPEG Only) (XML)
- 09 Mar 2018 - 1924 UTC - Has JPEG/XML (JPEG Only) (XML)
- 09 Mar 2018 - 1343 UTC
- 09 Mar 2018 - 0803 UTC
- 09 Mar 2018 - 0216 UTC - Has JPEG/XML (JPEG Only) (XML)
- 08 Mar 2018 - 2248 UTC
- 08 Mar 2018 - 1746 UTC - Has JPEG/XML (JPEG Only) (XML)
- 08 Mar 2018 - 1222 UTC - Has JPEG/XML (JPEG Only) (XML)
- 08 Mar 2018 - 1214 UTC
- 08 Mar 2018 - 0702 UTC - Has JPEG/XML (JPEG Only) (XML)
- 08 Mar 2018 - 0115 UTC - Has JPEG/XML (JPEG Only) (XML)
- 07 Mar 2018 - 1918 UTC

Google Earth Pro

Archivo Editar Ver Herramientas Ayuda

Buscar

Obtener instrucciones Historial

Lugares

- Radar
- Radiometro
- POPOCATEPETL Eruption
Observed and Forecast Ash for POPOCATEPETL
- Observed Ash
Valid at: 22/1030Z
- VA to F120
- Lugares temporales
- FUEGO Eruption
Observed and Forecast Ash for FUEGO
- Observed Ash
Valid at: 14/1130Z

Uso de capas

- Base de datos principal
- Fronteras y etiquetas
- Lugares
- Fotografias
- Calles
- Edificios 3D



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Tropical cyclone watch

- ✈ Monitor the formation, movement and degradation of tropical cyclones
- ✈ Advisories support the issuance of SIGMET on these events by the respective MWOs



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The screenshot shows the National Hurricane Center (NHC) website. The main heading is "NATIONAL HURRICANE CENTER" with the subtitle "NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION". Below the heading are navigation tabs for "ANALYSES & FORECASTS", "DATA & TOOLS", "EDUCATIONAL RESOURCES", "ARCHIVES", and "ABOUT NHC". A "Top News of the Day" section lists recent updates. The main content area is titled "Atlantic Graphical Marine Forecasts" and features a map of the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea. The map is divided into three regions: Eastern Pacific, Southwest Atlantic, and Caribbean. Below the map are links for "Graphical Tropical Weather Outlooks", "Active Storms", and "Marine Forecasts". A text box below the map states: "Atlantic - Caribbean Sea - Gulf of Mexico Tropical Weather Outlook. There are no tropical cyclones in the Atlantic at this time."

The screenshot shows a detailed forecast track for Hurricane Irma. A note at the top states: "Note: The cone contains the probable path of the storm center but does not show the size of the storm. Hazardous conditions can occur outside of the cone." The map shows the storm's path from the Caribbean Sea towards the Florida coast. Key forecast points are marked with times and days: 2 AM Mon, 2 AM Tue, 2 AM Sat, 2 AM Sun, 2 PM Fri, and 5 AM Thu. A legend at the bottom right defines symbols: a red dot for "Tropical Cyclone" and a white circle for "Post-Potential TC".

Time	Day	Symbol
2 AM	Mon	Tropical Cyclone
2 AM	Tue	Tropical Cyclone
2 AM	Sat	Tropical Cyclone
2 AM	Sun	Tropical Cyclone
2 PM	Fri	Tropical Cyclone
5 AM	Thu	Post-Potential TC

Hurricane Irma
Thursday September 07, 2017
5 AM AST Advisory 33

Current information: x
Center location 20.0 N 68.3 W
Maximum sustained wind 180 mph

Forecast positions:
● Tropical Cyclone
○ Post-Potential TC
Sustained winds: D < 39 mph



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Aerodrome warnings

- ✈ Give concise information of meteorological conditions that could adversely affect aircraft on the ground, including parked aircraft, and the aerodrome facilities and services
- ✈ Aerodrome warnings should relate to the occurrence or expected occurrence of:
tropical cyclone, thunderstorm, hail, snow, freezing precipitation, hoar frost or rime, sandstorm, dust-storm, rising sand or dust, strong surface wind and gusts, squall, frost, volcanic ash, tsunami, volcanic ash deposition, toxic chemicals, and other phenomena as agreed locally
- ✈ validity periods of not more than 24 hours



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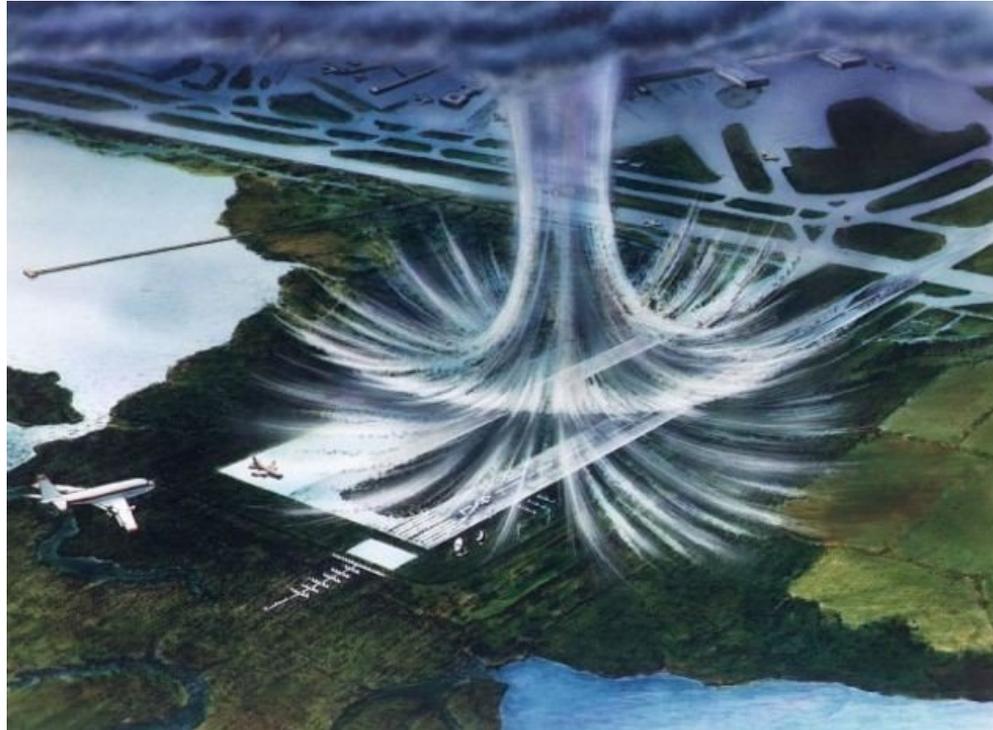
Wind shear warnings and alerts

- ✈ Prepared for aerodromes where wind shear is considered a factor
- ✈ Disseminated within the aerodrome in accordance with local arrangements
- ✈ Wind shear conditions are normally associated with:
 - thunderstorms, microbursts, funnel cloud (tornado or waterspout), and gust fronts, frontal surfaces, strong surface winds coupled with local topography; sea breeze fronts, mountain waves (including low-level rotors in the terminal area) and low-level temperature inversions



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SIGMET and OPMET

- ✈ Significant Meteorological Conditions and Operational Meteorological Information
- ✈ SIGMET information is issued by a MWO for its associated FIR and/or CTA / OPMET is issued by aerodrome meteorological offices
- ✈ Messages that describe the location of specified en-route weather phenomena which may affect the safety of aircraft operations
- ✈ SIGMETs are required to be issued whenever thunderstorms, turbulence, icing, mountain waves, volcanic ash clouds, tropical cyclones and radioactive clouds occur or are expected to occur
- ✈ OPMET information, including METAR/SPECI and TAF, provide information on the observed occurrence of specified meteorological conditions at the aerodrome:
 - surface wind, visibility, weather, cloud, temperature and atmospheric pressure



AVIATION WEATHER CENTER
NOAA NATIONAL WEATHER SERVICE

Local forecast HOME ADVISORIES FORECASTS OBSERVATIONS TOOLS NEWS SEARCH ABOUT USER

ADDs AIRMETs/SIGMETs

SIGMETs valid 1020 UTC 21 Jul 2016

The screenshot shows a map of the Americas with several red polygons indicating areas of SIGMET activity. The polygons are labeled with numbers such as 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

<https://www.aviationweather.gov/sigmet>

ONAMET
Oficina Nacional de Meteorología

PORTADA INSTITUCION NOTICIAS IMAGENES TSUNAMI BOLETINES Y ALERTAS HISTORIAL CONTACTOS

- Pronósticos
- Pronósticos Regionales
- Aviación
- Climatología
- Hidrometeorología
- Agrometeorología
- EMA
- Transparencia
- OMM WMO

SANTO DOMINGO 21 DE JUNIO 2016
AEROP. INT. DE LAS AMERICAS JFPG.-

WCSA31 MDSD 211100Z
MDCS SIGMET 2 VALID 211100/211100 MDSD-

MDCS SANTO DOMINGO FIR: SIGMET 2 CNL SIGMET 1VALID 210730/211130 MDSD-

http://www.metoffice.gov.tt/watches_warnings



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Guidance material

- ✈ ICAO Doc 7192, *Training Manual - Part F1 – Meteorology for Air Traffic Controllers and Pilots*
- ✈ ICAO Doc 8896, *Manual of Aeronautical Meteorological Practice*
- ✈ ICAO Doc 9161, *Manual on Air Navigation Services Economics*
- ✈ ICAO Doc 9377, *Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services*
- ✈ ICAO Doc 9691, *Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds*
- ✈ ICAO Doc 9766, *Handbook on the International Airways Volcano Watch – Operational Procedures and Contact List*
- ✈ ICAO Doc 9817, *Manual on Low Level Wind Shear*
- ✈ ICAO Doc 9855, *Guidelines on the Use of the Public Internet for Aeronautical Applications*
- ✈ ICAO Doc 9328, *Manual of Runway Visual Range Observing and Reporting Practices*
- ✈ ICAO Doc 9837, *Manual on Automatic Meteorological Observing Systems at Aerodromes*
- ✈ ICAO Doc 9873, *Manual on the Quality Management System for the Provision of Meteorological Service to International Air Navigation*



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North American
Central American
and Caribbean
[NACC] Office
Mexico City

South American
[SAM] Office
Lima

ICAO
Headquarters
Montréal

Western and
Central African
[WACAF] Office
Dakar

European and
North Atlantic
[EUR/NAT] Office
Paris

Middle East
[MID] Office
Cairo

Eastern and
Southern African
[ESAF] Office
Nairobi

Asia and Pacific
[APAC] Sub-office
Beijing

Asia and Pacific
[APAC] Office
Bangkok



THANK YOU