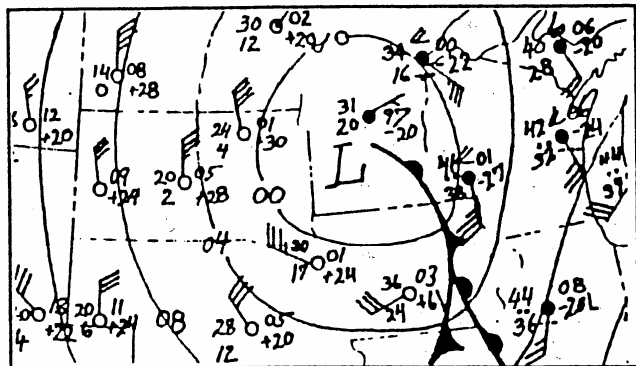


**WEATHER REPORTS AND FORECASTS
FACSIMILE REPORTS AND FORECASTS**

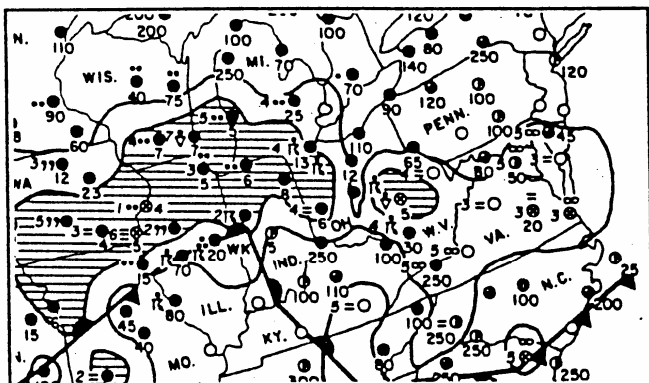
Surface Analysis Chart (Report)



The Surface Analysis Chart depicts actual frontal positions, pressure patterns, temperature, dewpoint, wind, weather, and obstructions to vision at the valid time of the chart.

Isobars are depicted by solid lines and indicate lines of equal pressure. Dashed lines indicate that the pressure gradient is weak.

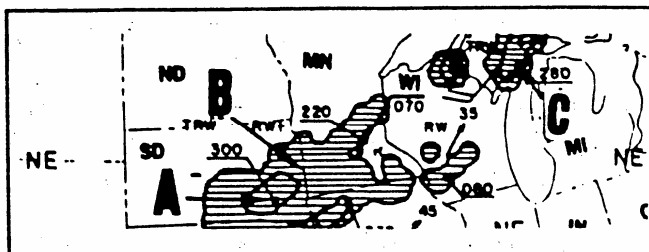
Weather Depiction Chart (Report)



The weather depiction chart provides a graphic display of both VFR and 1FR weather.

Numbers below a cloud cover symbol indicate height, in hundreds of feet, of the lowest cloud layer. Numbers and symbols to left of cloud cover symbol indicate visibility and type of obstruction to visibility.

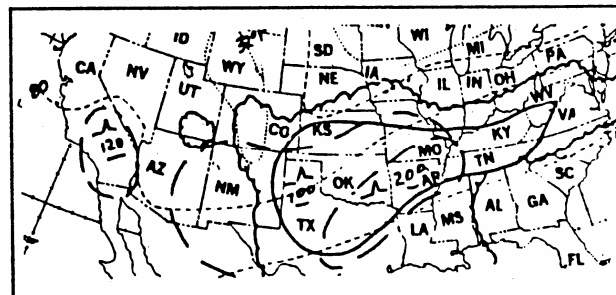
Radar Summary Chart (Report)



Radar Summary Chart (Report) (Cont)

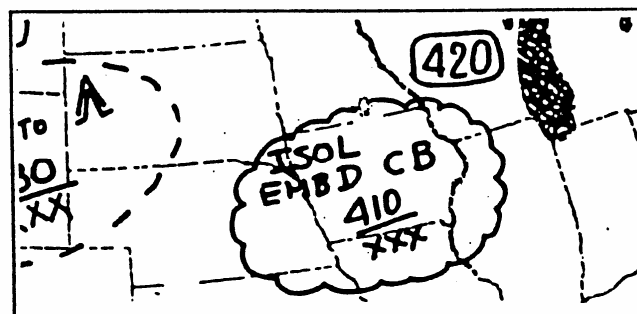
The radar summary chart is a collection of radar reports, including lines and cells of hazardous thunderstorms. It does not show clouds, only precipitation.

Low Level Significant Weather Prognostic Chart (Forecast)



The Low Level Significant Weather Prognostic Chart forecasts conditions up to 24,000 feet MSL.

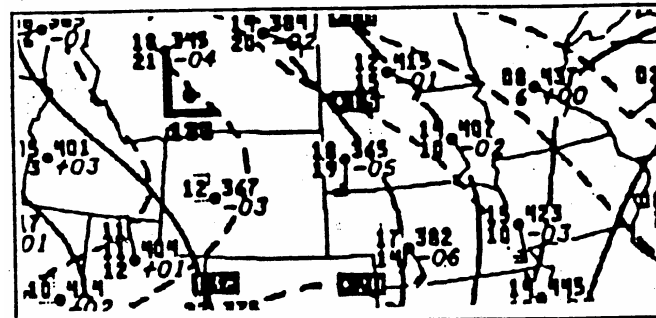
High Level Significant Weather Prognostic Chart (Forecast)



The High Level Significant Weather Prognostic Chart forecasts conditions from 24,000 feet MSL to 63,000 feet MSL.

Small scalloped lines indicate cumulonimbus clouds, icing, and moderate or greater turbulence.

Constant Pressure Chart (Report)



This chart shows observed temperature, wind, and temperature/dewpoint spread at specified flight levels.

Hatching on the chart indicates wind speed of 70 knots to 110 knots.



Constant Pressure Chart (Report) (Cont)

The minimum vertical wind shear for probable moderate or greater turbulence is 6 knots per 1,000 feet.

Winds Aloft forecast

| | | | | | | |
|-----------------------------------|---------|---------|---------|---------|---------|-------|
| VALID 020000Z FOR USE 2100-0600Z. | | | | | | |
| FT | 3000 | 6000 | 9000 | 12000 | 18000 | 24000 |
| ABI | 2512+14 | 2519+09 | 2426+02 | 2438-14 | 2345-26 | |
| ABQ | | 3115+02 | 3125-04 | 2934-18 | 2944-31 | |

The winds aloft forecast shows direction (true), velocity, (knots) and temperature (C).

Area Forecast

Used to determine forecast weather conditions, i.e. expected frontal movement, turbulence, and icing conditions for a specific area. Issued 3 times a day.

FLT PRCTNS. . . IFR would indicate 1FR conditions that meet Inflight advisory criteria.

SIG CLD AND WX. . ~ sky conditions, cloud heights, visibility, and obstructions to vision, and surface winds of 30 knots or more.

HAZARDS would contain a brief list of weather phenomena that meet AIRMET and/or SIGMET criteria and location of each.

ENROUTE WEATHER ADVISORIES

Transcribed Weather Broadcasts (TWEB)

TWEB provides continuously transcribed individual route forecasts for specific routs of flight, available on VOR and NDB Nav aids.

Inflight Advisories

CONVECTIVE SIGMETs consist of either an observation and a forecast or just a forecast for tornadoes, thunderstorm activity, or hail greater than or equal to 3/4 inch diameter.

SIGMET advisories include weather potentially hazardous to all aircraft.

AIRMET advisories include less severe conditions which may be hazardous, particularly to light aircraft.

Flight Service Stations broadcast AIRMETs and Non-Convective SIGMETs at 15 minutes and 45 minutes past the hour for the first hour after issuance. .

REPORTS AND FORECASTS

METAR-Aviation Routine Weather Reports

SPECI KMDW 121856Z 32005KT I 1/2SM RA OVCOO7 17/16 A2980 RMK RA835

METAR or SPECI identifies as normal or special. KMDW -4 letter identifier.

I 21 856Z - Date and time {in UTC} issued. 32005KT - Surface winds 320 degrees true, 5 knots.

I 1/2SM - one and one half statute miles visibility.

RA - two letter code depicting rain. OVCOO7 - Sky conditions as overcast at 700 AGL.

17116 - Temperature and dew point in degrees Celsius.

A2980 - Altimeter setting as 29.80

RMK RAB35 - Remarks - rain began 35 past the hour.

EXAMPLE:

SPECI KBOI 091854Z 32005KT 1 1/2 SM RA BR OV0007 17/16 A2990 RMK RAB 12

In this example, rain and mist are restricting visibility and the rain began at 1812Z.

EXAMPLE:

RMK FZDZB45 WSHFT 30FROPA

These remarks mean the wind shifted at 30 minutes past the hour due to frontal passage. The freezing drizzle began at 45 minutes past the hour.

Cloud heights are always above the surface. When determining thickness of layers based on a pilot report, be sure to convert cloud height to MSL by adding the field elevation. Pilot reports are always MSL.

VIRGA - is precipitation beneath clouds, which evaporates before reaching the ground.

SQUALLS - If reported at your destination, you should expect sudden increases in wind speed of at least 15 knots to a sustained speed of 20 knots or more for at least 1 minute.

TAF - Terminal Aerodrome ForecastS

KOKC 051 1 30Z 051 21 2 1 4008KT 5SM BR BKNO3O TEMPO 1316 1 1/2SM BR FM1600 1 801 OKT P6SM NSW SKC BECMG 2224 2001 3G20KT 4~M SHRA OVCO2O PROB4O 0006 2SM TSRA OVCO08CB BECMG 0608 21015KT P6SM NSW SCTO4O =

KOKC - 4 letter identifier

051 1 30Z - Date and time the TAF was issued.

051212 - Forecast period 5th day, 1200Z to 1200Z.

14008KT - Surface winds 140 degrees true 8 knots.

5SM BR - 5 statute miles visibility with mist.

BKNO30 - a layer of broken clouds at 3,000 AGL.
TEMPO 1316 1 1/2 SM BR - temporarily from
1300 to 1600, visibility 1/2 miles in the mist.
FM 1600 - Starting at 1600, weather is forecast
as...

The TAF is issued four times a day and is
usually valid for 24 hours.

The abbreviation "SKC" means the sky is clear of clouds.
A wind shown as "VRB" means the direction is variable.
Visibility shown as NP6SM~ means it is expected to be
more than statute miles. The abbreviation "PROB"
means probability and is followed by a percentage
number. PROB402102 means there is a 40% chance
between 2100Z and 0200Z for the described weather to
occur.

5398.

During preflight preparation, weather report forecasts
which are not routinely available at the local service
outlet (AFSS) can be obtained by means of contacting:

- A) pilot's automatic telephone answering service.
- B) air route traffic control center.
- C) weather forecast office (WFO)**

5399.

The most current en route and destination weather
information for an instrument flight should be obtained
from

- A) the FSS or WSO.**
- B) the ATIS broadcast.
- C) NOTAM's (Class 11).

5400.

The Hazardous In-flight Weather Advisory Service
(HIWAS) is a broadcast service over selected
VORs that provides:

- A) SIGMETs and AIRMET at 15 minutes and 45 minutes
past the hour for the first hour after issuance.
- B) continuous broadcast of in-flight weather advisories.**
- C) SIGMETs, CONVECTIVE SIGMETs and AIRMETs at
15 minutes and 45 minutes past the hour.

5401. J25 COM

The Telephone Information Briefing Service (TIBS)
provided by AFSSs includes

- A) weather information service on a common frequency
(122.0 MHz).
- B) recorded weather briefing service for the local area,
usually within 50 miles and route forecasts.
- C) continuous recording of meteorological and/or
aeronautical information available by telephone.**

NOTE: CORRECT ANSWER IN BOLD ITALICS

5402. J25 COM

The remarks section of the Aviation Routine Weather
Report (METAR) contains the following coded
information. What does it mean?
RMK FZDZB42 WSHFT 30 FROPA

- A) Freezing drizzle with cloud bases below 4,200 feet.
- B) Freezing drizzle below 4,200 feet and wind shear
- C) Wind shift at three zero due to frontal passage.**

5403. J25 COM

What is meant by the Special METAR weather
observation for KBOI?
SPECI KBOI 091854Z 32005KT 1 1/2SM RA BR
OVC007 17/16 A2990 RMK RAB12

- A) Rain and fog obscuring two-tenths of the sky; rain
began at 1912Z.
- B) Rain and mist obstructing visibility; rain began at
1812Z.**
- C) Rain and overcast at 1200 feet AGL.

5404. J25 COM

The station originating the following METAR observation
has a field elevation of 3,500 feet MSL. If the sky cover
is one continuous layer, what is the thickness of the
cloud layer? (Top of overcast reported at 7,500 feet
MSL).
METAR KHOB 151250Z 17006KT 4SM OVC005 13/11
A2998

- A) 2,500 feet
- B) 3,500 feet.**
- C) 4,000 feet.

5406.

What significant cloud coverage is reported by this
pilot report?
MOB
UA/OV 15NW MOB 1340Z/SK OVC 025/045
OVCO90

- A) Three (3) separate overcast layers exist with bases at
250, 7,500 and 9,000 feet.
- B) The top of the lower overcast is 2,500 feet. base and
the top of second overcast layer is 4,500 and 9,000 feet,
respectively.**
- C) The base of the second overcast layer is 2,500 feet;
top of second overcast layer is 7,500 feet; base of third
layer is 9,000 feet

5407.

To best determine observed weather conditions between
weather reporting stations, the pilot should refer to

- A) pilot reports.**
- B) Area Forecasts.
- C) prognostic charts.

Which is true concerning this radar weather report for OKC?

OKC 1934 LN 8TRW+/+ 86/40 1 64/60 1 99/1 1 5 15W
2425 MT 570 AT 159/65 2 INCH HAIL RPRTD
THIS ECHO

- A) There are three cells with tops at 1 1.500, 40.000. and 60.000 feet.
- B) The line of cells is moving 080° with winds reported up to 40 knots.
- C) The maximum top of the cells is 57,000 feet located 65 NM south-southeast of the station.**

5409.

What is the meaning of the terms PROB40 2102 +TSRA as used in a Terminal Aerodrome Forecasts (TAF)

- A) Probability of heavy thunderstorms with rain showers below 4000 feet at time 2102.
- B) Between 2100Z and 0200Z there is a forty percent (40%) probability of thunderstorms with heavy rain.**
- C) Beginning at 2102Z forty percent (40%) probability of heavy thunderstorms and rain showers.

5410. J25 COM

What does the contraction VRB in the Terminal Aerodrome Forecast (TAF) mean?

- A) Wind speed is variable throughout the period.
- B) Cloud base is variable.
- C) Wind direction is variable.**

5411.

Which statement pertaining to the following Terminal Aerodrome Forecast (TAF) is true?

TAF

KMEN 091 135Z 0915 15005KT 5SM HZ

BKNO6O

FM1600 VRBO4KT P6SM SKC

- A) WND in the valid period implies surface winds are forecast to be greater than 5 KTS
- B) wind direction is from 160° at 4 KTS and reported visibility is 6 status miles.
- C) SKC in the valid period indicates no significant weather and sky clear.**

5412.

The visibility in a Terminal Aerodrome Forecast (TAF) of P6SM implies that the prevailing visibility is expected to be greater than:

- A) 6 nautical miles.
- B) 6 statute miles.**
- C) 6 kilometer

NOTE: CORRECT ANSWER IN BOLD ITALICS

5413. J25 COM

Terminal Aerodrome Forecasts (TAF) are issued how many times a day and cover what period of time?

- A) Four times daily and are usually valid for a 24 hour period.**
- B) Six times daily and are usually valid for a 24 hour period including a 4-hour categorical outlook.
- C) Four times daily and are valid for 12 hours including a 6-hour categorical outlook.

5414.

Which information section is contained in the Aviation Area Forecast (FA)?

- A) Winds aloft, speed and direction.
- B) VFR Clouds and Weather (VFR CLDS/WX).**
- C) In-flight Aviation Weather Advisories.

5415.

The section of the Aviation Area Forecast (FA) entitled VFR Clouds and Weather contains a summary of:

- A) forecast sky cover, cloud tops, visibility, and obstructions to vision along specific routes.
- B) only those weather systems producing liquid or frozen precipitation, fog, thunderstorms, or 1FR ceilings.
- C) sky conditions, cloud heights, visibility, obstructions to vision, precipitation, and sustained surface winds of 20 knots or greater.**

5416.

In-flight Aviation Weather Advisories include what type of information?

- A) Forecasts for potentially hazardous flying conditions for en route aircraft.**
- B) State and geographic areas with reported ceilings and visibility's below VFR minimums.
- C) IFR conditions, turbulence, and icing within a valid period for the listed states.

5417. J25 COM

What type of Inflight Weather Advisories provides an en route pilot with information regarding the possibility of moderate icing, moderate turbulence, winds of 30 knots or more at the surface and extensive mountain obscurement?

- A) Convective SIGMETs and SIGMETs.
- B) Severe Weather Forecast Alerts (AWW) and SIGMETs.
- C) AIRMETs and Center Weather Advisories (CWA).**

5418. J25 COM

What single reference contains information regarding expected a volcanic eruption, that is occurring or expected to occur?

- A) In-Flight Weather Advisories.**
- B) Terminal Area Forecasts (TAF).
- C) Weather Depiction Chart.

5419.

The National Aviation Weather Advisory Unit prepares FA's for the contiguous U.S.

- A) twice each day.
- B) three times a day.**
- C) every 6 hours unless significant changes in weather require it more often.

5420.

Which forecast provides specific information concerning expected sky cover, cloud tops, visibility, weather, and obstructions to vision in a route format?

- A) Area Forecast.
- B) Terminal Forecast.
- C) Transcribed Weather Broadcast.**

5421. J25 COM

To obtain a continuous transcribed weather briefing including winds aloft and route forecasts for a cross-country flight, a pilot could monitor

- A) a TWEB on a low-frequency and/or VOR receiver.**
- B) the regularly scheduled weather broadcast on a VOR frequency.
- C) a high-frequency radio receiver tuned to En Route Flight Advisory Service.

5422. I57 COM

SIGMET's are issued as a warning of weather conditions which are hazardous

- A) to all aircraft.**
- B) particularly to heavy aircraft.
- C) particularly to light airplanes.

5423. I57 COM

Which correctly describes the purpose of Convective SIGMET's (WST)?

- A) They consist of an hourly observation of tornadoes, significant thunderstorm activity, and large hailstone activity.
- B) They contain both an observation and a forecast of all thunderstorm and hailstone activity. The forecast is valid for 1 hour only.
- C) They consist of either an observation and a forecast or just a forecast for tornadoes, significant thunderstorm activity, or hail greater than or equal to 3/4 inch in diameter.**

5424. I57 COM

What values are used for Winds Aloft Forecasts?

- A) True direction and MPH.
- B) True direction and knots.**
- C) Magnetic direction and knots.

NOTE: CORRECT ANSWER IN BOLD ITALICS

5425. I57 COM

On a Surface Analysis Chart, the solid lines that depict sea level pressure patterns are called

- A) isobars.**
- B) isogons.
- C) millibars.

5426. I58 COM

Dashed lines on a Surface Analysis Chart, if depicted, indicate that the pressure gradient is

- A) weak.**
- B) strong.
- C) unstable.

5427. I58 COM

Which chart provides a ready means of locating observed frontal positions and pressure centers?

- A) Surface Analysis Chart.**
- B) Constant Pressure Analysis Chart.
- C) Weather Depiction Chart.

5428.

On a Surface Analysis Chart, close spacing of the isobars indicates

- A) weak pressure gradient.
- B) strong pressure gradient.**
- C) strong temperature gradient.

5429.

The Surface Analysis Chart depicts

- A) frontal locations and expected movement, pressure centers, cloud coverage, and obstructions to vision at the time of chart transmission.
- B) actual frontal positions, pressure patterns, temperature, dewpoint, wind, weather, and obstructions to vision at the valid time of the chart.**
- C) actual pressure distribution, frontal systems, cloud heights and coverage, temperature, dewpoint, and wind at the time shown on the chart.

5430. I59 COM

Which provides a graphic display of both VFR and IFR weather?

- A) Surface Weather Map.
- B) Radar Summary Chart.
- C) Weather Depiction Chart.**

5431. I59 COM

When total sky cover is few or scattered, the height shown on the Weather Depiction Chart is the

- A) top of the lowest layer.
- B) base of the lowest layer.**
- C) base of the highest layer.

What information is provided by the Radar Summary Chart that is not shown on other weather charts?

- A) Lines and cells of hazardous thunderstorms.
- B) Ceilings and precipitation between reporting stations.
- C) Areas of cloud cover and icing levels within the clouds.

5433. I64 COM

Which weather chart depicts conditions forecast to exist at a specific time in the future?

- A) Freezing Level Chart.
- B) Weather Depiction Chart.
- C) 12-Hour Significant Weather Prognostication Chart.

5434. I64 COM

What weather phenomenon is implied within an area enclosed by small scalloped lines on a U.S. High-Level Significant Weather Prognostic Chart?

- A) Cirriform clouds, light to moderate turbulence, and icing.
- B) Cumulonimbus clouds, icing, and moderate or greater turbulence.**
- C) Cumuliform or standing lenticular clouds, moderate to severe turbulence, and icing.

5435. I64 COM

The U.S. High-Level Significant Weather Prognostic Chart forecasts significant weather for what airspace?

- A) 18,000 feet to 45,000 feet.
- B) 24,000 feet to 45,000 feet.
- C) 24,000 feet to 63,000 feet.**

5436. I64 COM

What is the upper limit of the Low Level Significant Weather Prognostic Chart?

- A) 30,000 feet.
- B) 24,000 feet.**
- C) 18,000 feet.

5440.

Hatching on a Constant Pressure Analysis Chart indicates

- A) hurricane eye.
- B) windspeed 70 knots to 110 knots.**
- C) windspeed 110 knots to 150 knots.

5441. I61 COM

What flight planning information can a pilot derive from Constant Pressure Analysis Charts?

- A) Winds and temperatures aloft.**
- B) Clear air turbulence and icing conditions.
- C) Frontal systems and obstructions to vision aloft.



5442.

From which of the following can the observed temperature, wind, and temperature/ dewpoint spread be determined at a specified altitude?

- A) Stability Charts.
- B) Winds Aloft Forecasts.
- C) Constant Pressure Analysis Charts.**

5443.

The minimum vertical wind shear value critical for probable moderate or greater turbulence is

- A) 4 knots per 1,000 feet.
- B) 6 knots per 1,000 feet.**
- C) 8 knots per 1,000 feet.

5550.

When making an instrument approach at the selected airport, what landing minimums apply.

- A) Standard alternate minimums.
- B) The landing minimums published for the type of procedure selected.**
- C) The IFR alternate minimums listed for that airport.

5559. J25 COM

En route Flight Advisory Service (EFAS) is a service that provides en route aircraft with timely and meaningful weather advisories pertinent to the type of flight intended, route, and altitude. This information is received by

- A) listening to en route VORs at 15 and 45 minutes past the hour.
- B) contacting flight watch, using the name of the ARTCC facility identification in your area, your aircraft identification, and name of nearest VOR, on 122.0 MHz below 17,500 feet MSL.**
- C) contacting the AFSS facility in your area, using your airplane identification, and the name of the nearest VOR.

5560. J25 COM

Weather Advisory Broadcasts, including Severe Weather Forecast Alerts (AWW), Convective SIGMETs, and SIGMETs, are provided by

- A) ARTCCs on all frequencies, except emergency, when any part of the area described is within 150 miles of the airspace under their jurisdiction.**
- B) AFSSs on 122.2 MHz and adjacent VORs, when any part of the area described is within 200 miles of the airspace under their jurisdiction.
- C) selected low-frequency and/or VOR navigational aids.

NOTE: CORRECT ANSWER IN BOLD ITALICS