

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
IFR PILOT EXAM-O-GRAM* NO. 16

LOW LEVEL PROGNOSTIC CHARTS

- - Visual Weather Forecasts - -

Certain weather situation charts in the current Instrument Rating (Airplane) Written Tests require interpretation by the applicant. Recent analyses indicate that many applicants are incorrectly interpreting this information. This Exam-O-Gram will attempt to clarify the information contained on the LOW LEVEL PROGNOSTIC CHART.

As a pilot, you should be familiar with the weather charts which are designed for rapid visual communication of weather conditions which may affect your flight. Weather situations are presented on LOW LEVEL PROGNOSTIC, WEATHER DEPICTION and RADAR SUMMARY charts. They are important in a good weather briefing because they assist both the pilot and weather briefer to visualize existing and expected weather conditions. These charts are available at all Weather Service Offices and an increasing number of Flight Service Stations. This Exam-O-Gram will cover only the LOW LEVEL PROGNOSTIC chart. Refer to Exam-O-Gram #15 for discussion of the WEATHER DEPICTION chart; #17 for the RADAR SUMMARY chart.

The LOW LEVEL PROGNOSTIC charts, as the name implies, show a prediction of low level (below 24,000 feet) weather conditions. These charts are issued as 4 panels - - 2 panels show the 12-hour and 24-hour forecast of clouds and freezing levels, and 2 panels show the 12-hour and 24-hour forecast of significant weather conditions. These charts are issued 4 times daily with valid times (the actual time at which the charted situation is expected to exist) of 0000Z, 0600Z, 1200Z, and 1800Z. The valid time of the 12-hour Prog is approximately 6 hours after receipt due to the time required for chart preparation. To determine expected conditions beyond the valid time of the 12-hour Prog, you must interpolate between the 12-hour and 24-hour Progs.

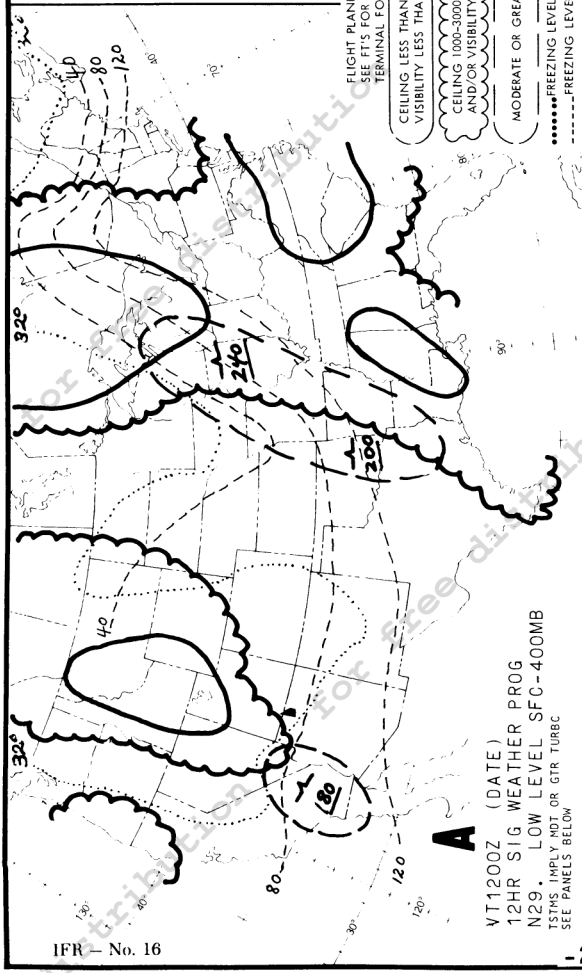
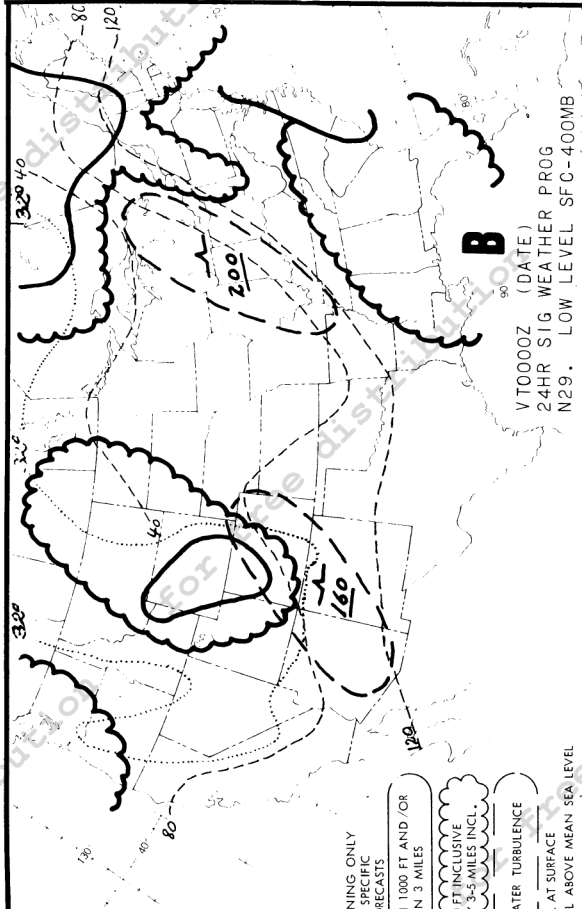
A complete set of PROG charts is reproduced on the next page, followed by a list of symbols used on the charts and a short quiz.

The 12-hour and 24-hour SIGNIFICANT WEATHER PROGs (Panels A and B) contain forecasts of ceiling and visibility, areas of moderate or greater turbulence, and freezing levels. Icing is implied in clouds above the freezing level.

The 12-hour and 24-hour SURFACE PROGs (Panels C and D) contain forecasts of fronts, pressure centers and areas of precipitation. In areas of precipitation, thunderstorms imply moderate or greater turbulence.

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FLIGHT PLANNING ONLY
SEE FT'S FOR SPECIFIC
TERMINAL FORECASTS

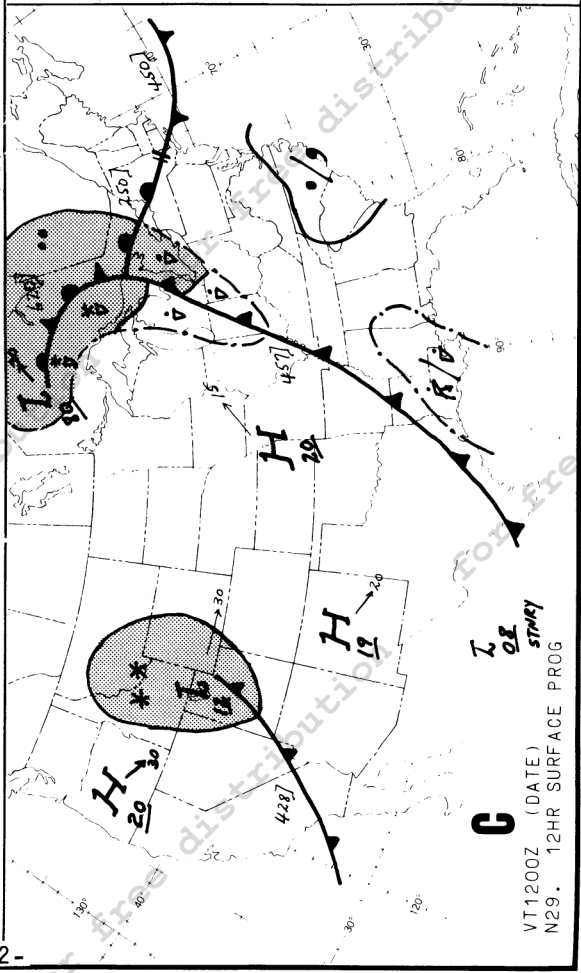
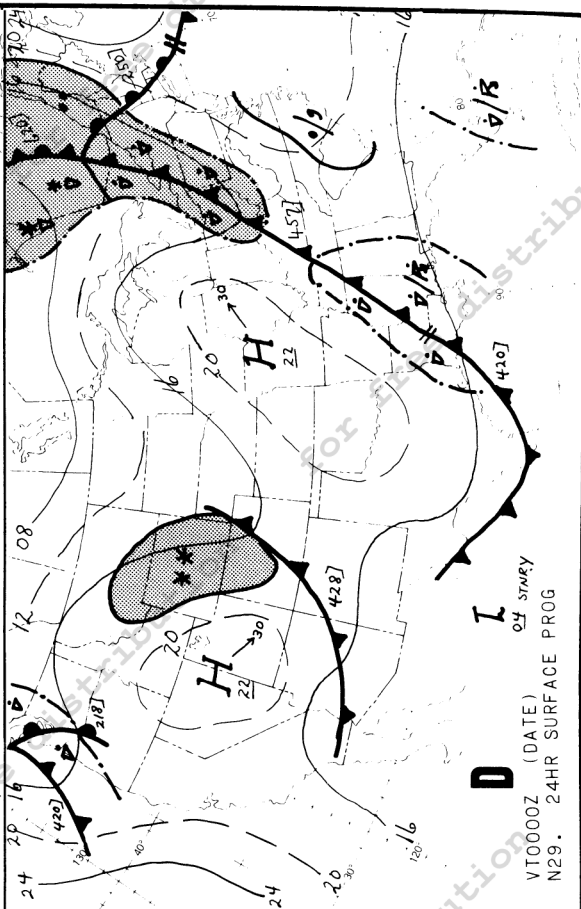
CEILING LESS THAN 1000 FT AND /OR
VISIBILITY LESS THAN 3 MILES

LONG DASHES INCLUDE
CEILING VISIBILITY 3 MILES INCL

MODERATE OR GREATER TURBULENCE

.....FREEZING LEVEL AT SURFACE
- - - - -FREEZING LEVEL ABOVE MEAN SEA LEVEL

A
VT1200Z (DATE)
12HR SIG WEATHER PROG
N29. LOW LEVEL SFC-400MB
T'S MS. IMPLY 'NDT' OR 'GTR TURBC'
SEE PANELS BELOW

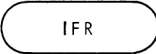

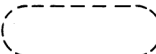




C
VT1200Z (DATE)
N29. 12HR SURFACE PROG

D
VT0000Z (DATE)
N29. 24HR SURFACE PROG

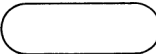
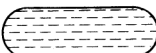
THE FOLLOWING SYMBOLS ARE USED ON LOW LEVEL PROG CHARTS TO SHOW THE CONDITION INDICATED

SIG WEATHER PROG



	CEILING LESS THAN 1000 FT AND/OR VISIBILITY LESS THAN 3 MILES
VFR	AREAS NOT OUTLINED INDICATE CEILING ABOVE 3000 FEET AND VISIBILITY MORE THAN 5 MILES.
	CEILING 1000-3000 FT INCLUSIVE AND/OR VISIBILITY 3-5 MILES
	MODERATE OR GREATER TURBULENCE
	MODERATE TURBULENCE
	SEVERE TURBULENCE
-----	FREEZING LEVEL ABOVE MSL
.....	FREEZING LEVEL SURFACE

SURFACE PROG

CONTINUOUS OR INTERMITTENT PRECIPITATION

	LESS THAN .5 AREA COVERAGE
	.5 OR MORE AREA COVERAGE
●	INTERMITTENT RAIN
● ●	CONTINUOUS RAIN
✱	INTERMITTENT SNOW
✱ ✱	CONTINUOUS SNOW

SHOWERS

	LESS THAN .5 AREA COVERAGE
	.5 OR MORE AREA COVERAGE
● ▽	RAIN SHOWERS
✱ ▽	SNOW SHOWERS
R	THUNDERSTORMS

QUIZ (answers on the next page)

1. Converted to local standard times, the valid (forecast) time for the 12-hour Prog is _____.
2. Valid time (CST) for the 24-hour PROGs is _____.
3. On a flight from KANSAS CITY to DALLAS, would you expect icing above 8,000 MSL in northeastern OKLAHOMA? _____.
4. The freezing level in central KANSAS at 1800 CST on the current day is expected to be _____.
5. On a flight from OKLAHOMA CITY to LOS ANGELES, moderate or greater turbulence is forecast for 0400 PST in the general vicinity of _____.
6. What type of precipitation is expected in WYOMING at 1700 MST? _____.
7. If you were planning a flight across northeastern WYOMING at 1700 MST, would you expect IFR, VFR, OR MVFR weather? _____.
8. By 0700 EST on the current day, the significant weather in WEST VIRGINIA and central PENNSYLVANIA is expected to be _____.
9. Would you expect the weather in ARKANSAS to be improving or deteriorating by 1800Z? _____.
10. Would you expect the weather in COLORADO to be improving or deteriorating by 2100Z? _____.

Answers to the QUIZ

1. 0700E, 0600C, 0500M, 0400P, 0200H, and 0200A.
2. 1800 CST.
3. Not likely (no clouds are forecast below 3000 feet and other clouds are unlikely in the high pressure area.
4. 8,000 feet MSL.
5. Western ARIZONA, southern CALIFORNIA and southern NEVADA.
6. Continuous snow over more than half the area.
7. MVFR.
8. Ceilings between 1,000 and 3,000 feet AGL and/or visibility 3 to 5 miles.
9. Improving (Interpolate between the 12-hour and 24-hour progs.
10. Deteriorating.

Remember that the LOW LEVEL PROGNOSTIC charts represent a forecast of weather conditions which are expected to -- but do not always -- develop. The meteorologist or pilot weather briefer on duty will help you examine current and pertinent weather details by referring to surface weather reports, terminal forecasts, radar information, AIRMETS, SIGMETS, and PIREPS. After making a decision to fly into an area of marginal weather, ALWAYS plan an alternate course of action in case the weather goes "Sour."