

WINDS AND TEMPS ALOFT FORECAST (FB) FORMAT

1. The product header includes the date and time observations were collected, the forecast valid date and time, and the time period during which the forecast is to be used.
2. Wind direction is indicated in tens of degrees (two digits) with reference to true north and wind speed is given in knots (two digits).
 - a. Light and variable wind or wind speeds of less than 5 knots are expressed by **9900**.
 - b. Forecast wind speeds of 100 through 199 knots are indicated by subtracting 100 from the speed and adding 50 to the coded direction.
 - 1) EXAMPLE: A forecast of wind from 250 degrees at 145 knots is encoded as **7545**.
 - c. Forecast wind speeds of 200 knots or greater are indicated as a forecast speed of 199 knots.
 - 1) EXAMPLE: **7799** is decoded as wind from 270 degrees at 199 knots or greater.
3. Temperature is indicated in degrees Celsius (two digits) and is preceded by the appropriate algebraic sign (+ or -) for the levels from 6,000 through 24,000 feet.
 - a. Above 24,000 feet, the sign is omitted since temperatures are always negative at those altitudes.
4. EXAMPLES:
 - a. **1312+05** means the wind direction is from 130° (i.e., – southeast), the wind speed is 12 knots, and the temperature is 5°C.
 - b. **9900+10** means wind light and variable, temperature +10°.
 - c. **7735-07** means the wind direction is from 270° (i.e., west), the wind speed is 135 knots, and the temperature is minus 7°C.

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DATA BASED ON 010000Z
VALID 010600Z FOR USE 0500-0900Z. TEMPS NEG ABV 24000
FT 3000 6000 9000 12000 18000 24000 30000 34000 39000
MKC 9900 1709+06 2018+00 2130-06 2242-18 2361-30 247242 258848 550252

Line 1 - DATA BASED ON 010000Z - means that the forecast data is based on computer forecasts generated the first day of the month at 0000 UTC.

Line 2 - VALID 010600Z FOR USE 0500-0900Z. TEMPS NEG ABV 24000 - means that the valid time of the forecast is the 1st day of the month at 0600 UTC. The forecast winds and temperature are to be used between 0500 and 0900 UTC. Temperatures are negative above 24,000 feet.

Line 3 - FT 3000 6000 9000 12000 18000 24000 30000 34000 39000 - shows the altitudes analyzed in the report. FT indicates the altitude of the forecast, and each number (i.e., 3000) is an altitude.

Line 4 - MKC 9900 1709+06 2018+00 2130-06 2242-18 2361-30 247242 258848 550252 - shows the location of the forecast and the forecast data. MKC is the station identifier of the forecast. The rest of the data is the winds and temperature aloft forecast for the respective altitudes.

The following table interprets the data for the MKC (Kansas City, MO) FB report:

FT	3000	6000	9000	12000	18000	24000	30000	34000	39000
MKC	9900	1709+06	2018+00	2130-06	2242-18	2361-30	247242	258848	750252
Altitude (feet)	Coded	Wind			Temperature (°C)				
3,000 FT	9900	Light and variable			Not forecast				
6,000 FT	1709+06	170 degrees at 9 knots			+06 degrees Celsius				
9,000 FT	2018+00	200 degrees at 18 knots			Zero degrees Celsius				
12,000 FT	2130-06	210 degrees at 30 knots			-06 degrees Celsius				
18,000 FT	2242-18	220 degrees at 42 knots			-18 degrees Celsius				
24,000 FT	2361-30	230 degrees at 61 knots			-30 degrees Celsius				
30,000 FT	247242	240 degrees at 72 knots			-42 degrees Celsius				
34,000 FT	258848	250 degrees at 88 knots			-48 degrees Celsius				
39,000 FT	750252	250 degrees at 102 knots			-52 degrees Celsius				

The following example of an FB is provided for your reference. Study it to ensure that you understand the data presented.

DATA BASED ON 091200Z									
VALID 091800Z FOR USE 1400-2100Z. TEMPS NEG ABV 24000									
FT	3000	6000	9000	12000	18000	24000	30000	34000	39000
ABI		1931+10	1929+10	2024+06	2331-10	2448-23	235239	246348	256056
ABQ			2213+03	2327-04	2253-17	2263-27	227242	236946	245749
ABR	2017	2312+14	2308+09	2615+02	2724-13	2527-26	273641	274051	274562
AGC	(etc.)								
FT	45000	53000							
ABI	301049	281149							
ABQ	235061	244859							
ABR	224559	243756							
AGC	(etc.)								
Note: 45,000- and 53,000-foot winds are not available for selected locations in the conterminous U.S.									