

METAR EXERCISES

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Exercise 1. Determine the full content of the METAR below.

METAR: EGLL 031900Z 28004KT 9999 BKN020 M02/M07 Q1037 R24/490138 R01/490230 NOSIG

Answer:

EGLL = London Heathrow Airport

031900Z = 3rd day of the month, time: 1900 hours Zulu.

28004KT = The wind direction is 280 degrees with an average speed of 4 knots.

9999 = Visibility is then 10 kilometres.

BKN020 = The cloud cover is 'broken'. That means that the degree of cloud cover is 5-7 on a scale of 8. This cover is located at 2,000 feet altitude.

M02/M07 = The temperature is -2 °C. The dew point is -7 degrees °C.

Q1037 = The atmospheric pressure is 1037 hectopascals.

R24/490138 = Specific runway information = not relevant to drone pilots.

R01/490230 = Specific runway information = not relevant to drone pilots.

NOSIG = No significant changes expected.

Exercise 2. Based on the METAR below, determine whether or not you can execute the flight.

1. GO or No-Go

METAR: EGLL 031900Z 05015KT 9999 FEW003 OVC012 16/14 Q1021 NOSIG

Answer:

- **02019KT**: the wind speed is 15 knots. This is equivalent to 7-8 m/s.
- **9999**: visibility exceeds 10 kilometres.
- **16/14**: the temperature of 16 °C is above the dew point of 14 °C. Thus, there is no fog and/or mist.
- **FEW003**: cloud cover is 'scattered'. That is, the degree of cloud cover is 1-2 on a scale of 8. This cover is located at 300 feet altitude. There is a cumulonimbus, or shower cloud, here.
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Conclusion:

- Wind speed is within limits.
- Visibility is good.
- Light clouds hover at 90 meters.

The flight can be conducted: GO.

2. GO or No-Go

METAR: EGGP 031900Z 02019KT 5000 -SHSN SCT030CB M03/M05 Q1010 R01C/490146 NOSIG

Answer:

- **02019KT**: wind speed is 19 knots. This is equivalent to 9-10 m/s.
- **5000**: visibility is predominantly 5,000 meters.
- **-SHSN**: light snow showers are currently occurring.
- **SCT030CB**: cloud cover is 'scattered'. That is, the degree of cloud cover is 3-4 on a scale of 8. This cover is located at 3,000 feet altitude. There is a cumulonimbus, or shower cloud, here.

Conclusion:

- The wind speed is near the limit.
- There are light snow showers.
- There is cumulonimbus.

The flight cannot be conducted safely: NO-GO.

3. GO or No-Go

METAR: EGLL 031853Z 09003KT 0500 BCFG FEW002 FEW003 BKN005 02/01 Q1001 VIS NW 300 BCFG

Answer:

- **09003KT**: wind speed is 3 knots. This is equivalent to 1-2 m/s.
- **0500**: visibility is mostly 500 meters.
- **BCFG**: there are fog banks.
- **FEW002/003**: cloud cover is 'few'. That is, the degree of cloud cover is 1-2 on a scale of 8. This cover is at 200/300 feet altitude.
- **BKN005**: cloud cover is 'broken'. That means that the degree of cloud cover is 5-7 on a scale of 8. This cover is located at 500 feet altitude.

Conclusion:

Wind speed is within limits and low hanging clouds are also not obstructive. However, due to fog banks, visibility is at most 500 meters, which is not enough to fly under VFR conditions (at least 1,500 meters visibility).

The flight cannot be conducted safely: NO-GO.

4. GO or No-Go

METAR: EGGP 031856Z AUTO 09009KT 9999 CLR M03/M06 Q1001

Answer:

- **09009KT**: wind speed is 9 knots. This is equivalent to 4-5 m/s.
- **9999**: visibility exceeds 10 kilometres.
- **M03/M06**: the temperature is -3 °C. The dew point is -6 degrees °C.

Conclusion:

- Wind speed is within limits.
- Visibility is good

The flight can be conducted safely: GO.

Please note that the low temperatures can affect both the pilot/crew as well as the materials.

5. GO or No-Go

METAR: EGCC 031900Z 0000KT 10KM -SN OVC005 M3/M10 Q1000 RMK SC008

Answer:

- **0000KT**: there is no wind.
- **10KM**: visibility is mainly 10 kilometres.
- **-SN**: light snow showers are currently occurring.
- **OVC005**: Cloud cover is 'overcast'. That means that the degree of cloud cover is 8 on a scale of 8. This cover is located at 500 feet altitude.
- **M3/M10**: The temperature is -3 °C. The dew point is -10 degrees °C.

Conclusion:

The flight cannot be safely executed due to light snow: No-Go.

6. GO or No-Go

METAR: EGCC 031900Z 35010KT 310V010 9999 BKN030 BKN230 24/19 Q1023 NOSIG

METAR EGGP 031755Z AUTO 12002KT 0400 R23/0600N FG VV0150 06/05 Q1002 NOSIG

Answer:

EGCC:

- **35010KT**: the wind speed is 10 knots. This is equivalent to 4-5 m/s.
- **310V010**: the wind direction varies between 310 and 010 degrees.
- **9999**: visibility exceeds 10 kilometres
- **BKN030**: cloud cover is 'broken'. That means that the degree of cloud cover is 5-7 on a scale of 8. This cover is located at 3,000 feet altitude.
- **24/19**: The temperature is 24 °C. The dew point is 19 degrees °C.

EGGP:

- **12002KT**: the wind speed is 2 knots. This is equivalent to 1-2 m/s.
- **0400**: visibility is mostly 400 meters
- **FG**: there is fog (visibility < 1,000 meters)

Conclusion:

The flight can be executed around EGCC (Manchester Airport CTR), but due to poor visibility not around EGGP (Liverpool Airport CTR).