

# SYNOP and NCM codes

The Synoptic (SYNOP) and National Climatological Message (NCM) are used to send the coded observations by an agreed deadline. At some stations, these messages still need to be compiled by the human observer. However, stations using CODET and SAMOS have the benefit of automatic coding of their observations.

The SYNOP message has '9' groups that you must include when certain phenomena are occurring.

The SYNOP message used in the UK for *manual* observations is as follows.

03iii	i <sub>R</sub> i <sub>X</sub> hVv	Nddff	1s <sub>n</sub> TTT	2s <sub>n</sub> T <sub>d</sub> T <sub>d</sub> T <sub>d</sub>	4PPPP
5appp	6RRRt <sub>R</sub>	7wwW <sub>1</sub> W <sub>2</sub>	8N <sub>h</sub> C <sub>L</sub> C <sub>M</sub> C <sub>H</sub>		
333	1S <sub>n</sub> T <sub>n</sub> T <sub>n</sub> T <sub>n</sub>	2S <sub>n</sub> T <sub>n</sub> T <sub>n</sub> T <sub>n</sub>	3Es <sub>n</sub> T <sub>g</sub> T <sub>g</sub>	4E'sss	8N <sub>s</sub> Ch <sub>s</sub> h <sub>s</sub>
					9SpSpSpSp

Numbers in **RED** are indicators, identifying specific groups within the SYNOP. The regional indicator **03** is used by all UK stations.

**Note:** when the observation is produced by an automatic system (e.g. SAMOS), some additional groups are included in the SYNOP. For further details, see page 5 of the 'SAMOS' booklet.



### *Explanation of coded groups used in the SYNOP message (from manual observations)*

Code **iii** is your station number.

Code $i_R$	6RRRt <sub>R</sub> group included/omitted
1	Included
3	Omitted ( <i>no precipitation</i> )
4	Omitted ( <i>not available</i> )

- ✓ Use 4 at all times except for 00, 06, 12 and 1800 UTC observations.

Code $i_x$	7wwW <sub>1</sub> W <sub>2</sub> group included/omitted
1	Manned, included
2	Manned, omitted ( <i>no significant weather</i> )
3	Manned, omitted ( <i>not observed, not available</i> )
4	Automatic, included
5	Automatic, omitted ( <i>no significant weather</i> )
6	Automatic, omitted ( <i>not observed, not available</i> )

- ✓ Use 2 when your present weather code is 00, 01, 02 or 03, AND your past weather code is 00, 11 or 22.



Code h	Height of lowest cloud layer
0	0 – 149 ft
1	150 – 299 ft
2	300 – 599 ft
3	600 – 999 ft
4	1,000 – 1,999 ft
5	2,000 – 2,999 ft
6	3,000 – 4,999 ft
7	5,000 – 6,499 ft
8	6,500 – 7,999 ft
9	8,000 ft and above or no cloud
/	Height unknown e.g. base at lower level than station

**h** is the height of the base of the lowest cloud, of any amount, above the ground.

Code VV	Visibility
00	< 100 m
01	100 m
02	200 m
etc.	etc.
10	1,000 m
11	1,100 m
12	1,200 m
etc.	etc.
50	5,000 m
56	6 km
57	7 km
etc.	etc.
60	10 km

**VV** is the lowest horizontal visibility in any direction.

Code VV	Visibility
61	11 km
62	12 km
etc.	etc.
80	30 km
81	35 km
82	40 km
83	45 km
84	50 km
85	55 km
etc.	etc.
89	> 70 km

✓ Do not use codes 51 to 55 for visibility.



Code N	Description
0	No cloud in the sky ( <i>cloudless</i> )
1	One eighth or less, but not zero
2	Two eighths
3	Three eighths
4	Four eighths
5	Five eighths
6	Six eighths
7	Seven eighths or more, but cloud not covering sky completely
8	Sky totally covered by cloud
9	Sky obscured ( <i>e.g. thick fog</i> ) or cloud amount cannot be estimated
/	No observation

N is the total amount of cloud, in eighths or oktas, covering the sky.

Code **dd** is wind direction in compass degrees, with the end zero missing, e.g. 180 degrees is coded as '18'. When the wind is calm, code **dd** as '00'.

Code **ff** is mean wind speed (knots). When the wind is calm, code **ff** as '00'.

Code  $s_n$  indicates the sign for TTT and  $T_dT_dT_d$ . Use '0' when the temperature is positive or '1' when the temperature is negative.



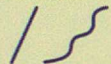
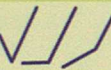

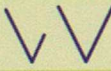

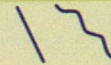

Code **TTT** is dry-bulb temperature in °C and tenths.

Code  $T_dT_dT_d$  is dew-point temperature in °C and tenths.

Code **PPPP** is the last four figures of the mean sea-level pressure in hectopascals (hPa) and tenths, e.g. if **PPPP** was coded as '9900', the mean sea-level pressure would be 990.0 hPa.

**Note:** 1 $s_n$ TTT, 2 $s_n$ TdTdTd and 4PPPP groups are omitted when data are not available from manually coded observations.



Code a	Pressure trace	Pressure change over the past three hours
0		The same or higher
1		Higher
2		Higher
3		Higher
4		No change
5		The same or lower
6		Lower
7		Lower
8		Lower

Code a is the pressure change characteristic over the past three hours.

Code **ppp** is amount of pressure change to one decimal place, e.g. if 'ppp' was coded as '023', the pressure change would be 2.3 hPa.

- ✓ If you are unable to easily determine the characteristic of the pressure change, use code 2 when the pressure is *higher* or code 7 when it is *lower* than the reading three hours ago.

**Note:** 5appp group can be omitted when data are not available from manually coded observations.



Code RRR provides the amount of precipitation indicated for the period  $t_R$ .

Rainfall may only be reported at 00, 06, 12 and 1800 UTC.

Code RRR	Amount of rainfall (mm)
990	Trace ( $<0.05$ )
991	0.1
992	0.2
993	0.3
994	0.4
etc.	etc.
001	1.0 – 1.5
002	1.6 – 2.4
003	2.5 – 3.5
004	3.6 – 4.4
005	4.6 – 5.4
etc.	etc.

Code  $t_R$  provides the period over which the precipitation amount 'RRR' is measured.

Time of observation (UTC)	Code $t_R$	Duration period (UTC)
0000	1	1800 – 0000
0600	2	1800 – 0600
1200	1	0600 – 1200
1800	2	0600 – 1800

**Note:** 6RRR $t_R$  group can be omitted when data are not available or no precipitation has occurred during the period.



Code **ww** provides the present weather code. General categories are indicated below, but the full set of codes are in the 'Present weather' booklet.

Code section ww	Description
99 – 91	Thunderstorms
90 – 80	Showers ( <i>any type</i> )
79 – 70	Snow or frozen precipitation
69 – 60	Rain, or rain and snow mixed (sleet)
59 – 50	Drizzle, or rain and drizzle
49 – 40	Fog
39 – 30	Blowing/drifting sand/snow
29 – 20	Recent weather ( <i>past hour</i> )
19 – 00	Other phenomena ( <i>no precipitation at the station at the time of observation</i> )



Code  $W_1W_2$  provides two code figures to give as complete a description as possible of the past weather. The time period is the last six hours for observations at 00, 06, 12 and 1800 UTC, the last three hours for observations at 03, 09, 15 and 2100 UTC and the previous hour at other times.

If the weather has been similar throughout the relevant period, the code for  $W_1$  and  $W_2$  can be the same (e.g.  $W_1W_2=66$ ).

- ✓ If your station is not manned 24 hours a day, you may be unable to assess the past weather. Use a '/' for  $W_1$  and/or  $W_2$  if you cannot provide past weather.

Code $W_1W_2$	Past weather description
0	Cloud covering half or less of the sky throughout the period
1	Cloud covering more than half of the sky during part of the period and covering half or less during part of the period
2	Cloud covering more than half of the sky throughout the period
3	Sandstorm, duststorm or blowing snow
4	Fog or thick haze (< 1,000 m visibility)
5	Drizzle
6	Rain, or rain and drizzle mixed
7	Snow, or rain and snow mixed
8	Shower(s)
9	Thunderstorm(s) with or without ppn



Code  $N_h$  is the total amount of sky (eighths) covered by LOW cloud types.

Use the same coding as for total cloud  $N$ . If there are no LOW clouds, report the total amount of MEDIUM cloud. If there are no LOW or MEDIUM clouds, or no clouds at all, use code 0.

Codes  $C_L$ ,  $C_M$  and  $C_H$  give low, medium and high cloud types respectively, using a priority order as shown in these tables.

Low cloud types $C_L$	Description (in descending order of priority)
9	Cumulonimbus (Cb) with anvil
3	Cb without anvil
4	Stratocumulus (Sc) from the spreading out of cumulus (Cu)
8	Cu and Sc (not from spreading out of Cu) at different levels
2	Cu of moderate or great vertical extent
=1*	Cu of small vertical extent
=5*	Sc not from the spreading out of Cu
=6*	Stratus (St) not accompanied by precipitation
=7*	St or Cu fractus accompanied by precipitation
0	No Cb, Cu, Sc or St present
/	Cb, Cu, Sc or St not visible (usually due to fog or blowing snow)

\*Codes 1, 5, 6 and 7 all have equal priority, so report the type with the most cloud.



Medium cloud types $C_M$	Description (in descending order of priority)
9	Alto cumulus (Ac) of a chaotic sky (generally several levels)
8	Ac in the form of turrets or tufts
7	Ac together with altostratus (As) or nimbostratus (Ns)
6	Ac from the spreading out of Cu or Cb
5	Ac progressively invading the sky
4	Ac continually changing shape ( <i>lenticular</i> )
7	Ac in two or more layers
=3*	Thin Ac at one level
=7*	Thick Ac at one level
2	Thick As or Ns
1	Thin As
0	No Ac, As or Ns
/	Ac, As or Ns invisible (usually due to extensive low cloud)

\*Codes 3 and 7 have equal priority, so report the type with the most cloud.

High cloud types $C_H$	Description (in descending order of priority)
9	Cirrocumulus (Cc) alone or predominant
7	Cirrostratus (Cs) covering the whole sky
8	Cs not invading and not covering the whole sky
6	Cs increasing and above 45° elevation
5	Cs increasing but below 45° elevation
4	Cirrus (Ci) progressively invading the sky
3	Ci from the upper part of a Cb
2	Thick Ci or Ci in the form of turrets or tufts
1	Ci ( <i>filaments or hooks</i> ) not invading the sky
0	No Cc, Cs or Ci
/	Cc, Cs or Ci invisible (usually due to extensive lower cloud)



Code  $s_n$  gives the sign for  $T_x T_x T_x$ ,  $T_n T_n T_n$  and  $T_g T_g$ . Use '0' when positive or '1' when negative.

Code  $T_x T_x T_x$  for max. temperature ( $^{\circ}\text{C}$  and tenths) over the preceding 12 hours, reported at 1800 UTC.

Code  $T_n T_n T_n$  for min. temperature ( $^{\circ}\text{C}$  and tenths) over the preceding 12 hours, reported at 0600 UTC.

Code  $T_g T_g$  for grass min. temperature (to nearest whole  $^{\circ}\text{C}$ ) reported at 0600 UTC. Round to the odd value for values exactly halfway between whole numbers (e.g.  $3.5^{\circ}\text{C}$  would be reported as '03').

Code E provides the state of ground *without* snow or measurable ice cover. (Do not confuse with E' which is state of ground with snow or ice cover.)

*\*Codes 0, 1, 2 and 4 refer to the bare patch; others apply to the open representative area. Always make sure you report the highest applicable code.*

Code E	Description of state of ground <i>without</i> snow or measurable ice cover
0*	Surface of ground dry ( <i>without cracks and no appreciable amount of dust or loose sand</i> )
1*	Surface of ground moist
2*	Surface of ground wet ( <i>standing water in small or large pools on the surface</i> )
3	Flooded
4*	Surface of ground frozen
5	Glaze on ground
6	Loose, dry dust or sand not covering ground completely
7	Thin cover of loose, dry dust or sand covering ground completely
8	Moderate or thick layer of loose, dry dust or sand covering ground completely
9	Extremely dry with cracks
/	Ground partly or completely covered by snow or measurable ice cover



Code E' provides the state of ground with snow or measurable ice cover.

Code E'	Description of state of ground <i>with snow or measurable ice cover</i>
0	Ground predominately covered by ice
1	Compact or wet snow ( <i>with or without ice</i> ) covering less than one half of ground
2	Compact or wet snow ( <i>with or without ice</i> ) covering at least one half of ground
3	Even layer of compact or wet snow covering ground completely
4	Uneven layer of compact or wet snow covering ground completely
5	Loose, dry snow covering less than one half of the ground
6	Loose, dry snow covering at least one half of the ground
7	Even layer of loose, dry snow covering ground completely
8	Uneven layer of loose, dry snow covering ground completely
9	Snow covering ground completely; deep drifts
/	Ground not partly or completely covered by snow or measureable ice cover

Code sss is used to report the amount of snow or measurable ice cover (cm).

Code sss	Snow depth (cm)
997	< 0.5
998	< 1/2 cover
999	Measurement impossible
001	1
002	2
003	3
004	4
etc.	etc.



### *Individual cloud layers (8N<sub>s</sub>Ch<sub>s</sub>h<sub>s</sub>)*

The 8N<sub>s</sub>Ch<sub>s</sub>h<sub>s</sub> or '8' groups are used to report amount, type and height of significant cloud layers. Report in this order:

lowest layer of any amount;

the next lowest layer of at least 3/8;

the next lowest layer of at least 5/8; and then

any Cb not already included in those three layers.

Code N<sub>s</sub> is the amount of cloud (in eighths or oktas).

Code C is the type of cloud.

Code C	Type of cloud
0	Cirrus
1	Cirrocumulus
2	Cirrostratus
3	Alto cumulus
4	Altostratus
5	Nimbostratus
6	Stratocumulus
7	Stratus
8	Cumulus
9	Cumulonimbus



Code  $h_s h_s$  is the height of the cloud base above the station (ft).

Code $h_s h_s$	Cloud base (ft)
00	< 100
01	100
02	200
etc.	etc.
10	1,000
11	1,100
12	1,200
etc.	etc.
50	5,000
56	6,000
57	7,000
etc.	etc.

Code $h_s h_s$	Cloud base (ft)
60	10,000
61	11,000
62	12,000
etc.	etc.
80	30,000
81	35,000
82	40,000
83	45,000
84	50,000
85	55,000
etc.	etc.
89	>70,000

✓ Do not use codes 51 to 55 for the height of cloud base.



### '9' groups ( $9S_pS_pS_pS_p$ )

Many weather phenomena can be coded in the  $9S_pS_pS_pS_p$  groups if they add *significant* value to your observation. Several of these phenomena *must* be coded if they are occurring at the time of observation.

911ff	Highest gust in the past hour ( <i>at least 25 knots</i> )
907tt	Time group for highest gust in the past hour
919M <sub>w</sub> D <sub>a</sub>	Water spouts, tornadoes, dust devils, whirlwinds
926S <sub>0</sub> l <sub>0</sub>	Hoar frost or coloured precipitation
927S <sub>6</sub> T <sub>w</sub>	Frozen deposit and temperature variation
932RR	Maximum diameter of hailstones
945h <sub>i</sub> h <sub>t</sub>	Height of tops of lowest cloud or height of fog top
96147	Reports of fog, visibility in range 60–99 m
96148	Reports of fog, visibility in range 30–59 m
96149	Reports of fog, visibility below 30 m
980V <sub>s</sub> V <sub>s</sub>	Visibility towards the sea
994A <sub>3</sub> D <sub>a</sub>	Day darkness



Indicate *relevant time or time period* by the inclusion of one or more time groups, when appropriate.

902tt	Time phenomena started
903tt	Time phenomena ended
906tt	Duration of phenomena or start time of persistent phenomena
907tt	Duration of period of reference ending at the observation

The **tt** code relates to the *time prior to the observation* when the phenomenon occurred. The code is broken into steps of six minutes each, such that code 10 is applicable for a complete hour (90710).

Code tt	Time (in six-minute steps)
00	At the time of observation
01	6 minutes before the observation
02	12 minutes before the observation
03	18 minutes before the observation
etc.	etc.
10	60 minutes ( <i>one hour</i> ) before the observation

To code the *highest gust speed*, ff, in knots during the past hour, 911ff is used with 90710. The highest gust must be at least 25 knots. Also, record the highest gust in the 10 minutes before the observation, if possible.



To code *water spouts, tornadoes, whirlwinds and dust devils*, use the 919M<sub>w</sub>D<sub>a</sub> group.

Phenomenon type (M <sub>w</sub> )		Direction of phenomenon (D <sub>a</sub> )	
Code M <sub>w</sub>	Phenomenon	Code D <sub>a</sub>	Direction
0	Waterspout(s) within 3 km of the station	0	At the station
1	Waterspout(s) more than 3 km from the station	1	North-east
2	Tornado clouds within 3 km of the station	2	East
3	Tornado clouds more than 3 km from the station	3	South-east
4	Whirlwinds of slight intensity	4	South
5	Whirlwinds of moderate intensity	5	South-west
6	Whirlwinds of severe intensity	6	West
7	Dust devils of slight intensity	7	North-west
8	Dust devils of moderate intensity	8	North
9	Dust devils of severe intensity	9	In all directions



To code *hoar frost and coloured precipitation*, use the 926S<sub>0</sub>i<sub>0</sub> group.

Hoar frost or coloured precipitation (S <sub>0</sub> )		Intensity of the phenomena (i <sub>0</sub> )	
Code S <sub>0</sub>	Phenomenon	Code i <sub>0</sub>	Intensity
0	Hoar frost on horizontal surfaces	0	Slight
1	Hoar frost on vertical surfaces	1	Moderate
2	Precipitation containing sand or desert dust	2	Heavy or strong
3	Precipitation containing volcanic ash		



To code frozen deposit and temperature variation, use the 927S<sub>6</sub>T<sub>w</sub> group.

Frozen deposit (S <sub>6</sub> )		Temperature variation (T <sub>w</sub> )	
Code S <sub>6</sub>	Type of frozen deposit	Code T <sub>w</sub>	Variation of temperature in period covered by W <sub>1</sub> W <sub>2</sub>
0	Glaze	0	Temperature steady
1	Soft rime	1	Temperature falling but not below 0 °C
2	Hard rime	2	Temperature rising but not above 0 °C
3	Snow deposit	3	Temperature falling to below 0 °C
4	Wet snow deposit	4	Temperature rising to above 0 °C
5	Freezing wet snow deposit	5	Irregular variation, passing through 0 °C
6	Compound deposits ( <i>glaze with wet snow, etc.</i> )	6	Irregular variation, not passing through 0 °C
7	Ground ice*	7	Variation of temperature not observed
		8	Not allocated
		9	Variation unknown due to lack of a thermograph

\*This includes ice or ice-encrusted snow, or freezing snow melt (snow that is compacted and frozen as a result of road traffic movement). Ground ice, rather than glaze, is most often seen on roads.



To code *maximum diameter of hailstones*, use 932RR.

Report when the hailstone diameter is 5 mm or more. RR = diameter in whole mm.

To code *height of tops of lowest cloud or height of fog top*, use 945h<sub>t</sub>h<sub>c</sub>.

This must be a measured height above the station level using a local instrument or observed from an aircraft above the station.

Height of tops of lowest cloud/fog top (h <sub>t</sub> h <sub>c</sub> )	
Code h <sub>t</sub> h <sub>c</sub>	Measured height (in 30 m steps)
00	Below 30 m (approx 100 ft)
01	30 m
02	60 m
03	90 m
etc.	etc.
10	300 m

- ✓ If observed height is between two quoted heights, report the lower code figure.

To code *dense fog*, use 96147, 96148 or 96149, as appropriate.

When the visibility falls below 100 m, the code figure in the standard visibility group (VV) is '00'. The appropriate '9' group can therefore be used to add significant value.

Use 96147 when visibility is 60 to 99 m.

Use 96148 when visibility is 30 to 59 m.

Use 96149 when visibility is less than 30 m.

To code *visibility towards the sea*, use 980 V<sub>s</sub>V<sub>s</sub>.

This group is to be reported when the seaward visibility is *different* from that in VV.

- ✓ Use the same code for V<sub>s</sub>V<sub>s</sub> as used for VV. Remember your '9' group should always add significant value to your observation.



To code *day darkness*, use 994A<sub>3</sub>D<sub>a</sub>.

Day darkness is 'a state of gloom caused by a concentration of smoke at no great height above ground level ... the darkening of sky looks abnormal, often with a coloration'. To be significant it should be dark enough to cause street lighting to come on when it would otherwise be switched off.

Code A <sub>3</sub>	Day darkness	Code D <sub>a</sub>	Direction
0	Day darkness, bad	0	At the station
1	Day darkness, very bad	1	North-east
2	Day darkness, black (!)	2	East
		3	South-east
		4	South
		5	South-west
		6	West
		7	North-west
		8	North



## National Climatological Message (NCM)

The NCM code is used for sending climatological observations, which are always made at 0900 UTC but also at 2100 UTC at some stations.

NCMs are particularly important for understanding

the UK climate. They are used to identify trends, e.g. increases in average temperatures over many years, and to compile statistics, such as annual rainfall.

Note: In a similar way to the SYNOP message, all indicators are shown in **RED**.

Data after the iii station number are reported at 0900 UTC

iii    0s<sub>n</sub>T<sub>g</sub>T<sub>g</sub>T<sub>g</sub>    1s<sub>n</sub>T<sub>c</sub>T<sub>c</sub>T<sub>c</sub>    2/EE'E<sub>c</sub>

First three groups after the SSS indicator refer to period 2100 to 0900 UTC

555    0s<sub>n</sub>T<sub>x</sub>T<sub>x</sub>T<sub>x</sub>    1s<sub>n</sub>T<sub>n</sub>T<sub>n</sub>T<sub>n</sub>    2R<sub>t</sub>R<sub>t</sub>R<sub>t</sub>R<sub>t</sub>    3/SSS    4s<sub>n</sub>T<sub>3</sub>T<sub>3</sub>T<sub>3</sub>    5<sub>n</sub>T<sub>1</sub>T<sub>1</sub>T<sub>1</sub>    6HTFG    7Ssss    8/s<sub>d</sub>s<sub>d</sub>s<sub>d</sub>

Data after the 666 indicator refer to the period 0900 to 0900 UTC

666    0s<sub>n</sub>T<sub>x</sub>T<sub>x</sub>T<sub>x</sub>    1s<sub>n</sub>T<sub>n</sub>T<sub>n</sub>T<sub>n</sub>    2R<sub>t</sub>R<sub>t</sub>R<sub>t</sub>R<sub>t</sub>

State of ground data are reported after the 888 indicator

888    0EEEE    1EEEE    2E'E'E'E'    3E'E'E'E'

Data after the 444 indicator are reported at 2100 UTC

iii    444    0s<sub>n</sub>T<sub>x</sub>T<sub>x</sub>T<sub>x</sub>    1s<sub>n</sub>T<sub>n</sub>T<sub>n</sub>T<sub>n</sub>    2R<sub>t</sub>R<sub>t</sub>R<sub>t</sub>R<sub>t</sub>



The NCM uses the same coding system as the SYNOP message; other explanations are detailed below.

T<sub>c</sub>T<sub>c</sub>T<sub>c</sub> is concrete minimum, T<sub>3</sub>T<sub>3</sub>T<sub>3</sub> is 30 cm soil temperature and T<sub>1</sub>T<sub>1</sub>T<sub>1</sub> is 100 cm soil temperature (°C and tenths).

T<sub>c</sub> is the state of concrete slab measured at 0900 UTC.

#### Code for T<sub>c</sub>

- 0 = Dry
- 1 = Moist
- 2 = Wet
- 3 = Icy
- / = No observation (*due to snow cover*)

The R<sub>t</sub>R<sub>t</sub>R<sub>t</sub>R<sub>t</sub> groups relate to rainfall (mm and tenths).

SSS is total amount of bright sunshine (hours and tenths) for the previous day.

The 'previous day' means from 0000 to 2400 UTC, unless otherwise defined.

HTFG is to indicate if the previous day was a day of hail, thunder, fog or gale. Use '/' code if no data are available.

#### Code for H

- 0 = No hail, ice, etc.
- 1 = Diamond dust
- 2 = Snow grains
- 3 = Snow pellets
- 4 = Ice pellets or hail (diameter < 5 mm)
- 5 = Hail (diameter 5–9 mm)
- 6 = Hail (diameter 10–19 mm)
- 7 = Hail (diameter 20 mm or more)
- 9 = No hail, ice, etc. during restricted observing period

#### Code for T

- 0 = Thunder not heard
- 1 = Thunder heard
- 9 = Thunder not heard during restricted observing period

#### Code for F

- 0 = Visibility of 1,000 m or more at 0900 UTC the previous day
- 1 = Visibility of less than 1,000 m at 0900 UTC the previous day caused by any form of obscuration (fog, snow, smoke, etc.) must be included



### Code for G

- 0 = No gale
- 1 = Gale (mean wind speed of 34 knots or more for a period of at least 10 minutes)
- 9 = No gale during restricted observing period

Ssss is to indicate a day of snow (S) for the previous day and the depth of snow (sss) in cm at 0900 UTC today.

- 0 = No snow or sleet
- 1 = Rain and snow mixed (sleet)
- 5 = Snow
- 9 = No snow or sleet during restricted observing period

S<sub>d</sub>S<sub>d</sub>S<sub>d</sub> is the depth of fresh snow (cm) at 0900 UTC today.

**Note:** This group refers to any fresh snow that has fallen during the previous 24 hours (since 0900 UTC yesterday). Only report this if the ground is more than half covered. If the snow depth has decreased during the 24-hour period, omit the group. If the snow depth has not changed but there has been some fresh snow during the 24-hour period, report '997'.

Use 0EEEE to report the state of ground *without* snow or measurable ice cover at 12, 15, 18, and 2100 UTC the *previous* day. Use 1EEEE for 00, 03, 06, and 0900 UTC on the *day* of observation.

Use 2E'E'E'E' for the state of ground *with* snow or measurable ice cover for 12, 15, 18 and 2100 UTC the *previous* day. Use 3E'E'E'E' for 00, 03, 06 and 0900 UTC on the *day* of observation.

- ✓ Report E or E' for any three-hourly report, but never use both at the same time. Use '/' for the one not reported.

### Checking your SYNOP and NCMs

- ✓ Each month, a record of the NCMs received from your station will be sent to you. Please check it for accuracy and completeness, then send back any changes or a 'nil' return within one week.
- ✓ All NCMs and SYNOPs are checked on receipt for quality and timeliness by duty staff at Eskdalemuir. If data are missing they are re-sent by them using PC Anywhere, or by phone.