

Weather Station Plot

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Content

- **Station Model**
- **Practice**

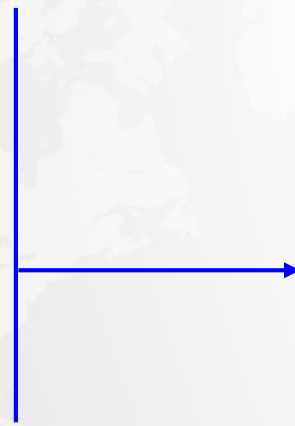


Station Model / Surface Plot

Simple symbols to display large amounts of meteorological information in a small area

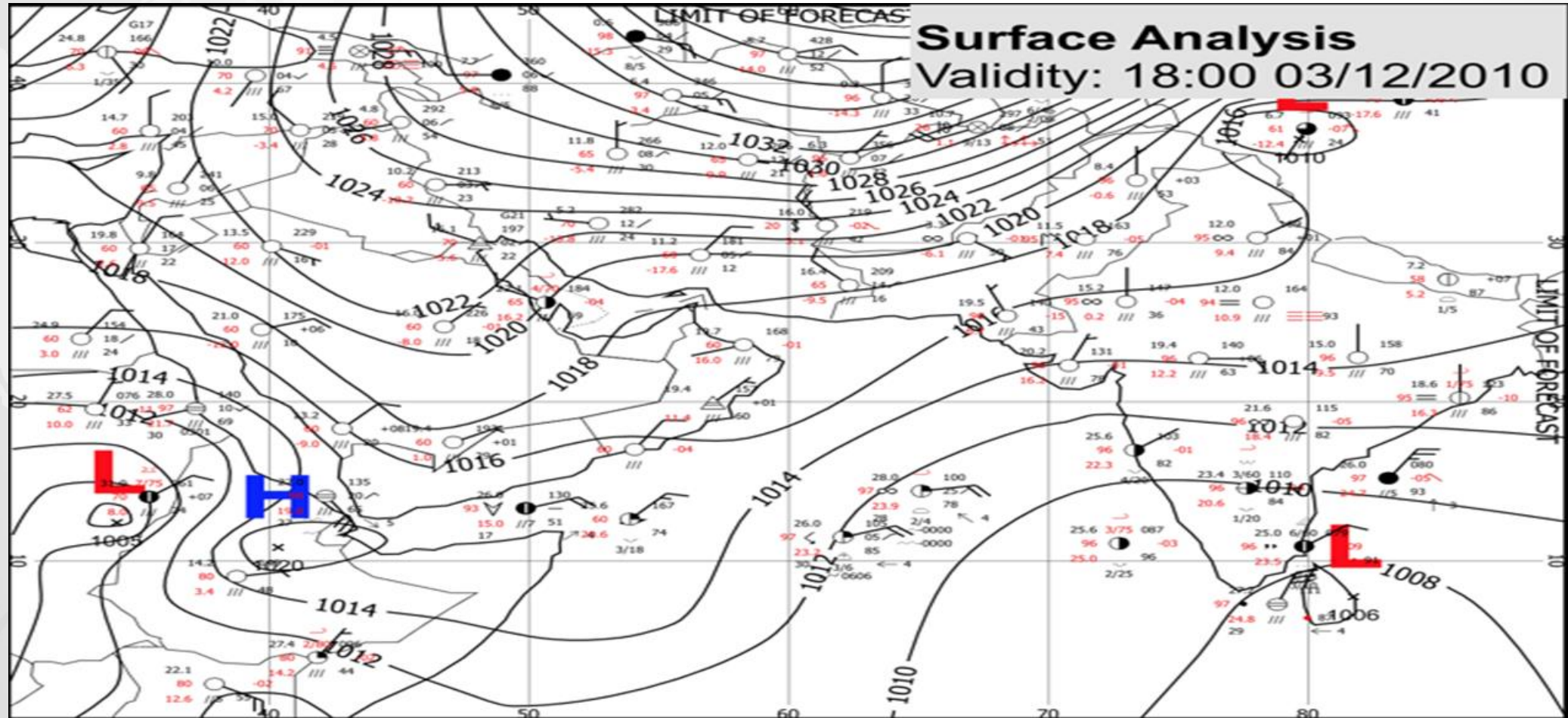
Synoptic Observations:

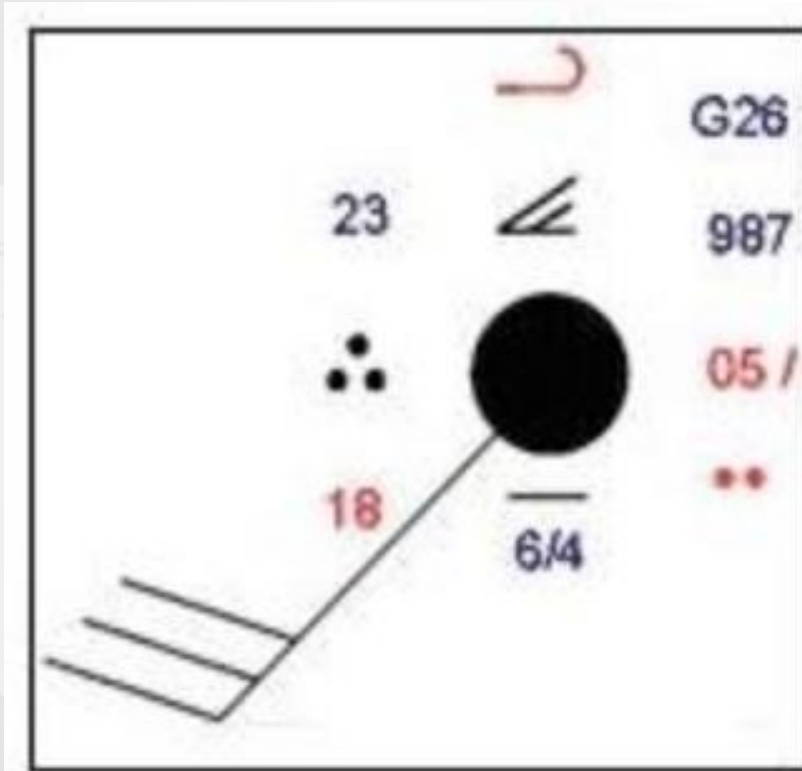
- Surface
- 850 mb
- 700 mb
- 500 mb
- 300 mb



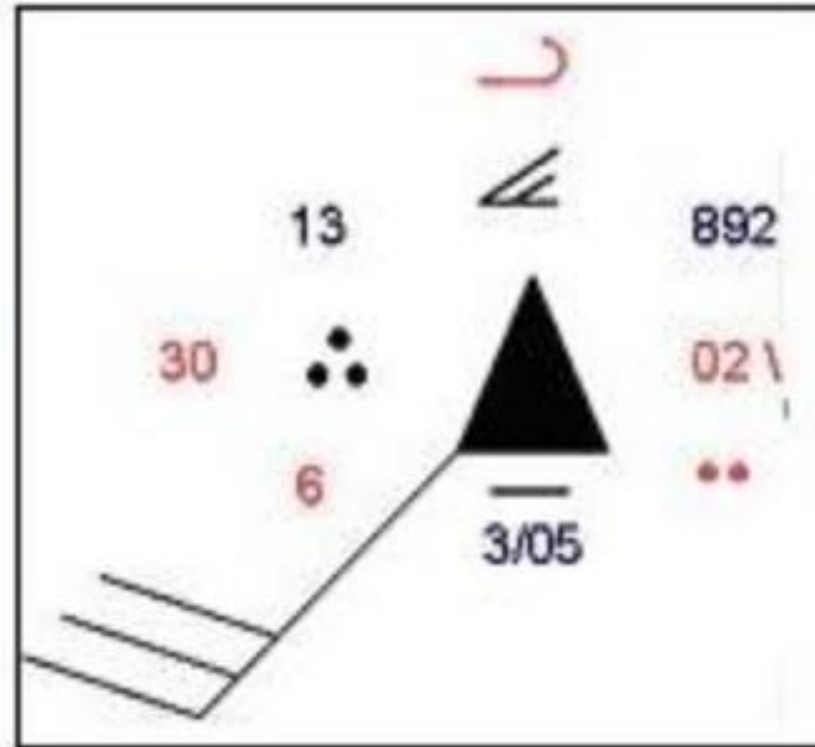
Upper Air Observations







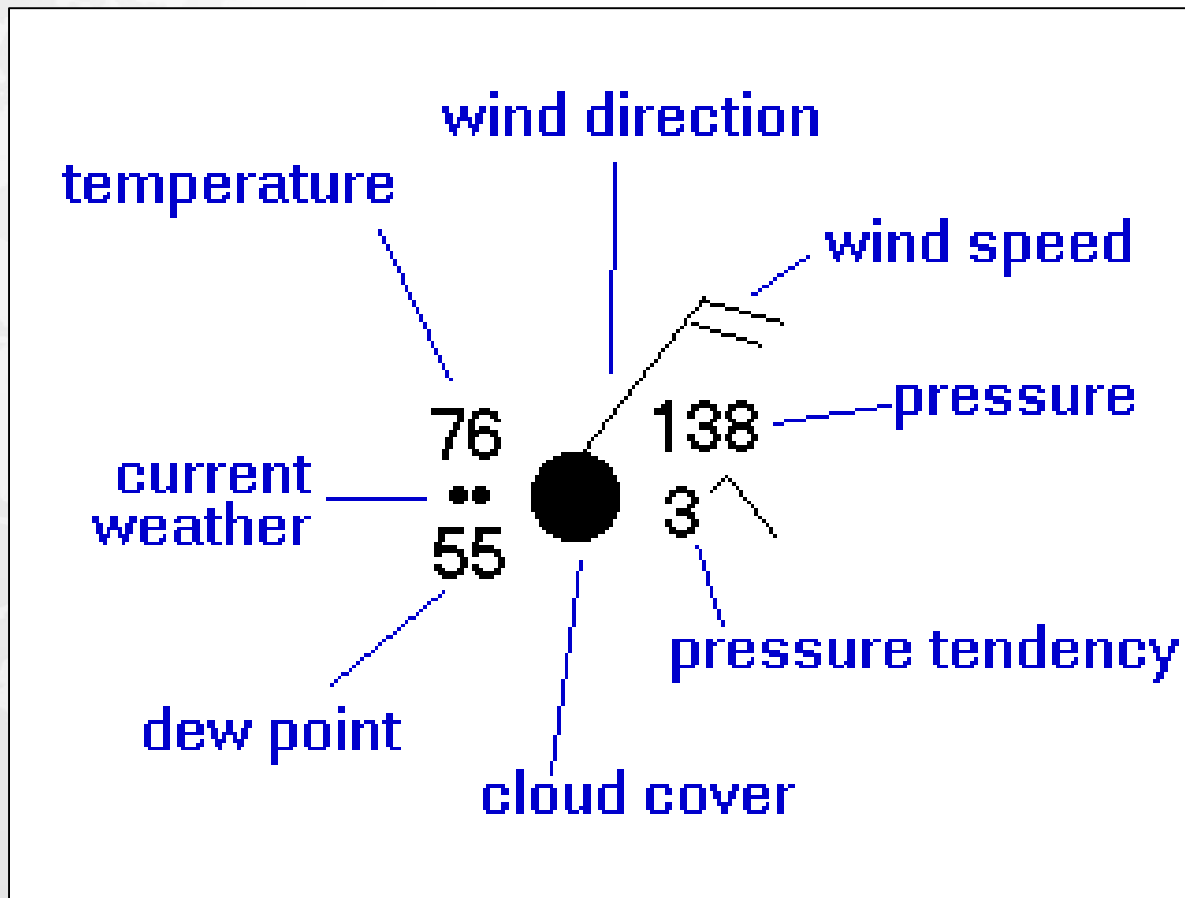
Manual Observation



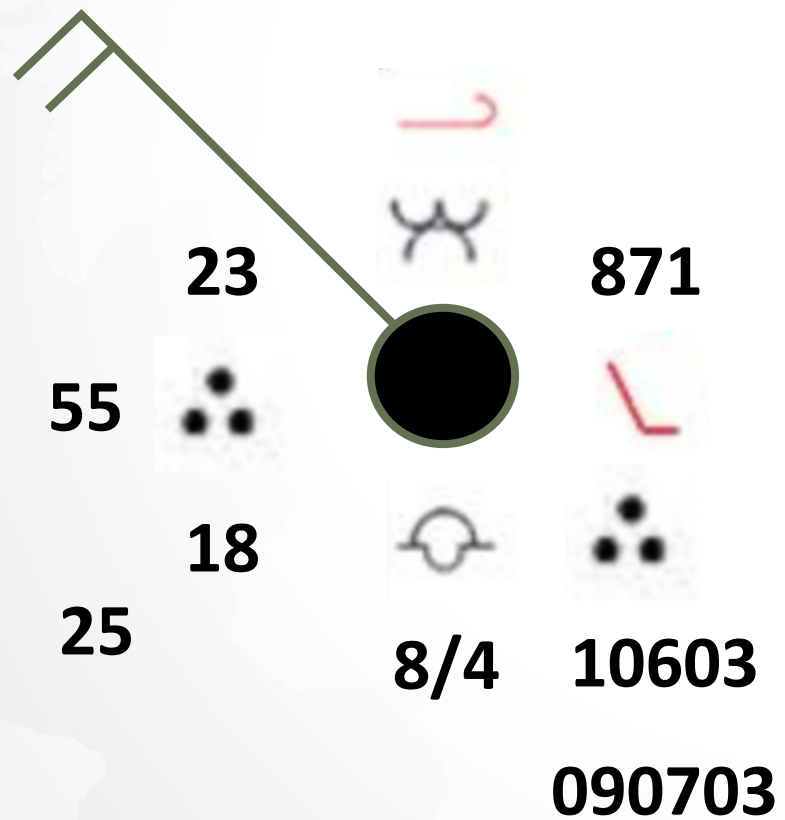
Automatic Observation



Station Model



Station Model



Station Model

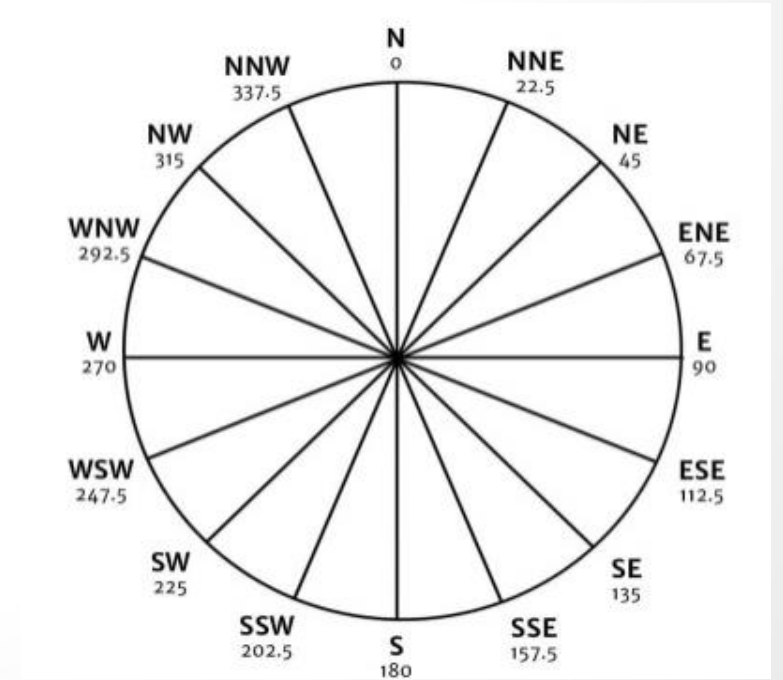
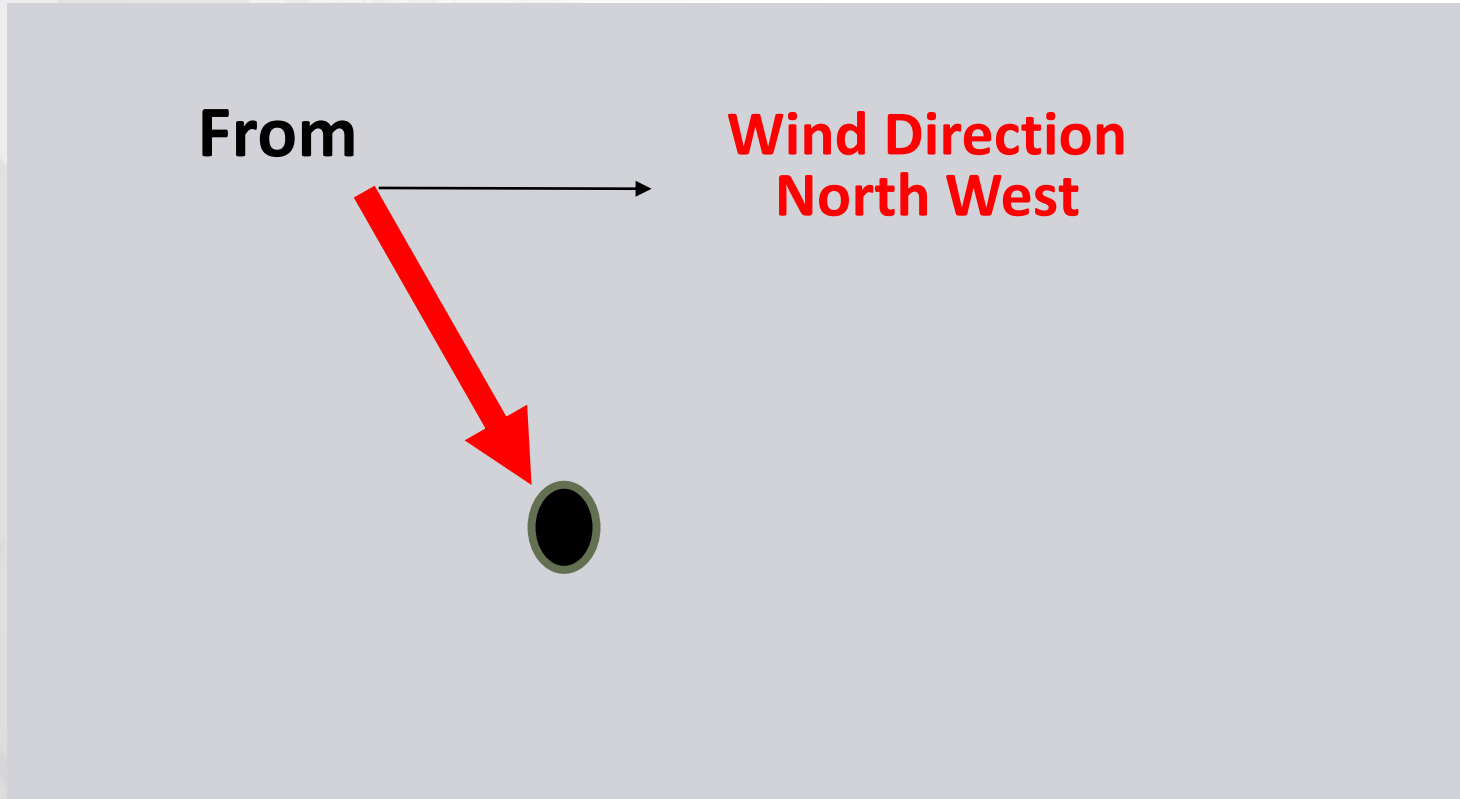
Overcast



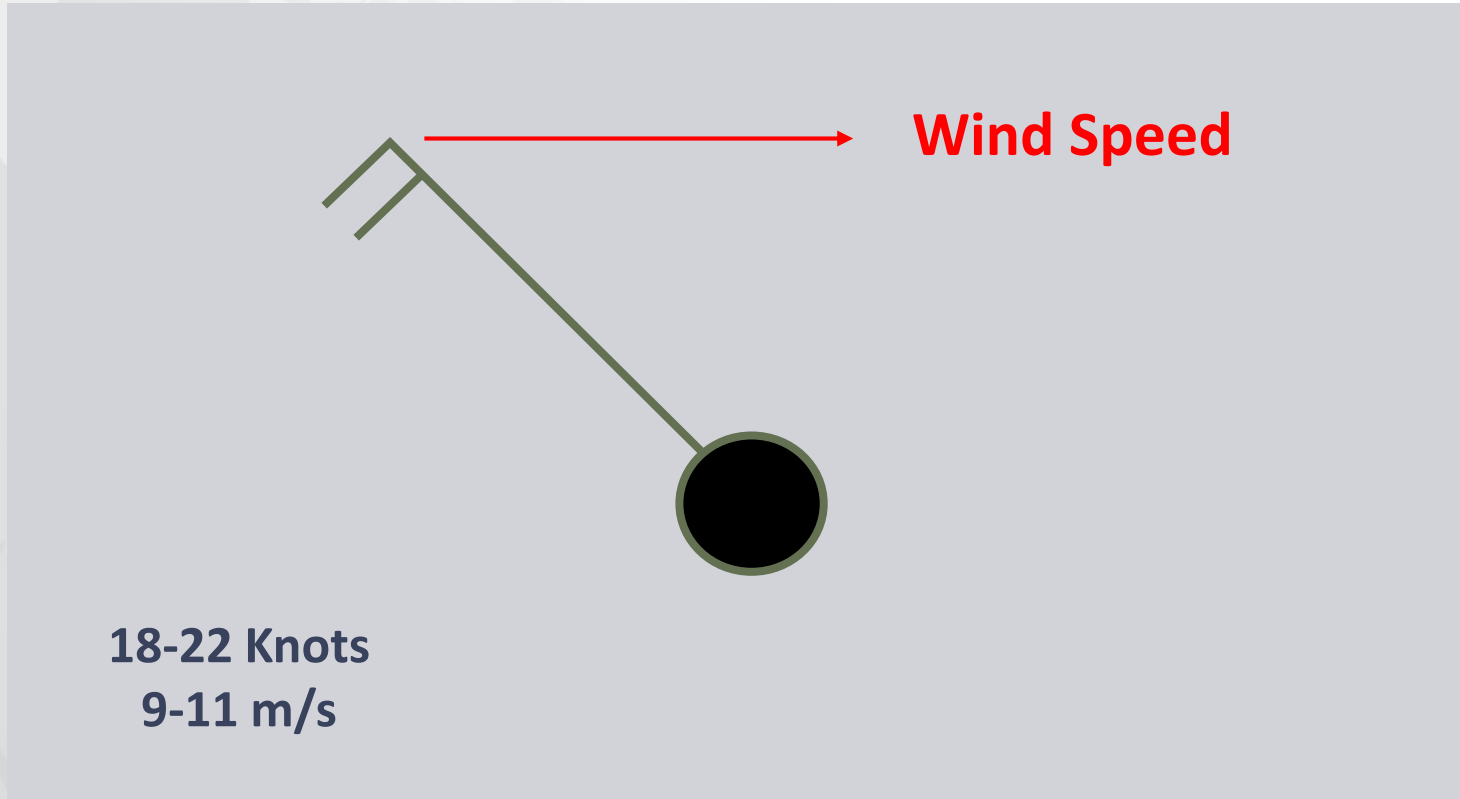
Cloud Cover

-  **No clouds**
-  **Less than one-tenth or one-tenth**
-  **Two-tenths or three-tenths**
-  **Four-tenths**
-  **Five-tenths**
-  **Six-tenths**
-  **Seven-tenths or eight-tenths**
-  **Nine-tenths**
-  **Completely overcast**
-  **Sky obscured**

Station Model

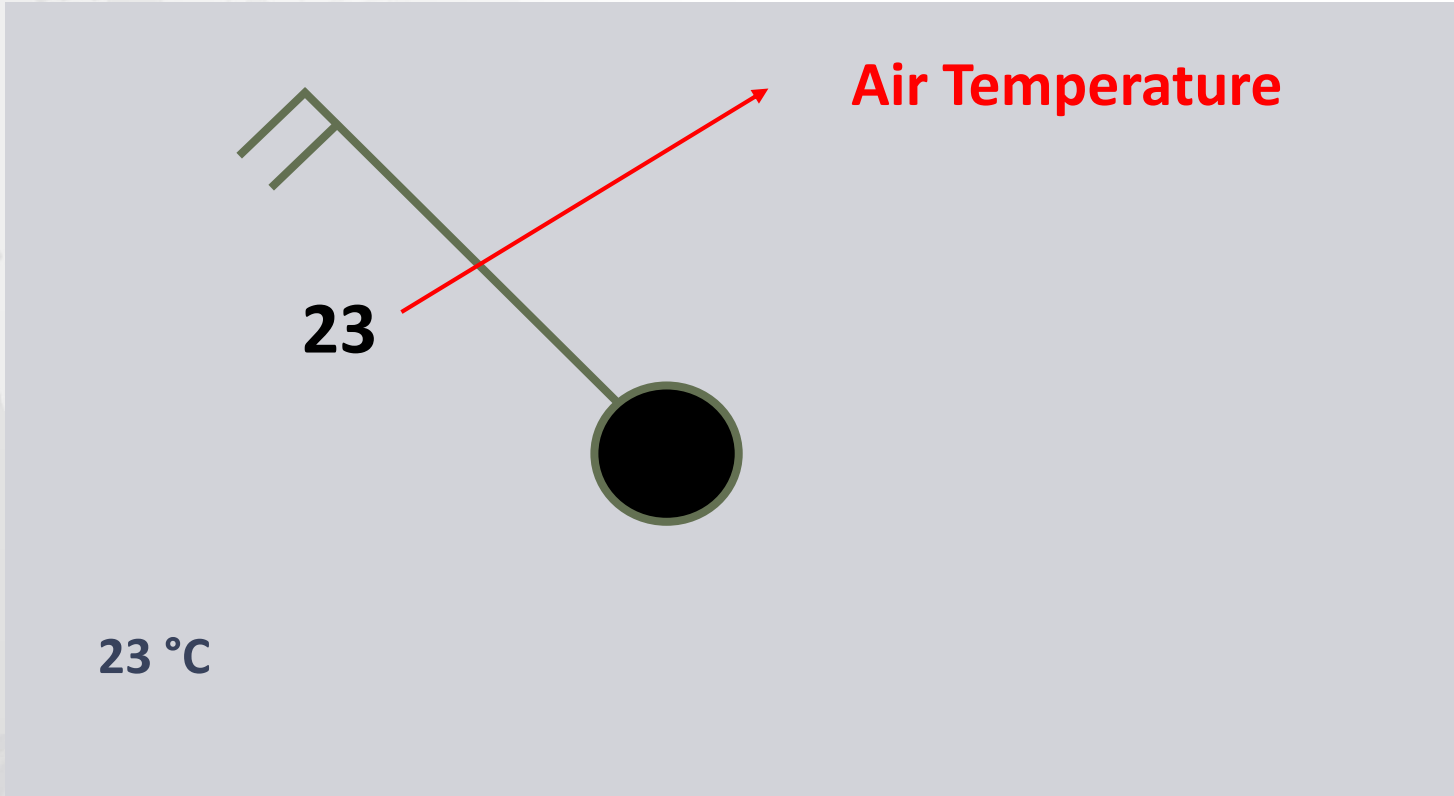


Station Model



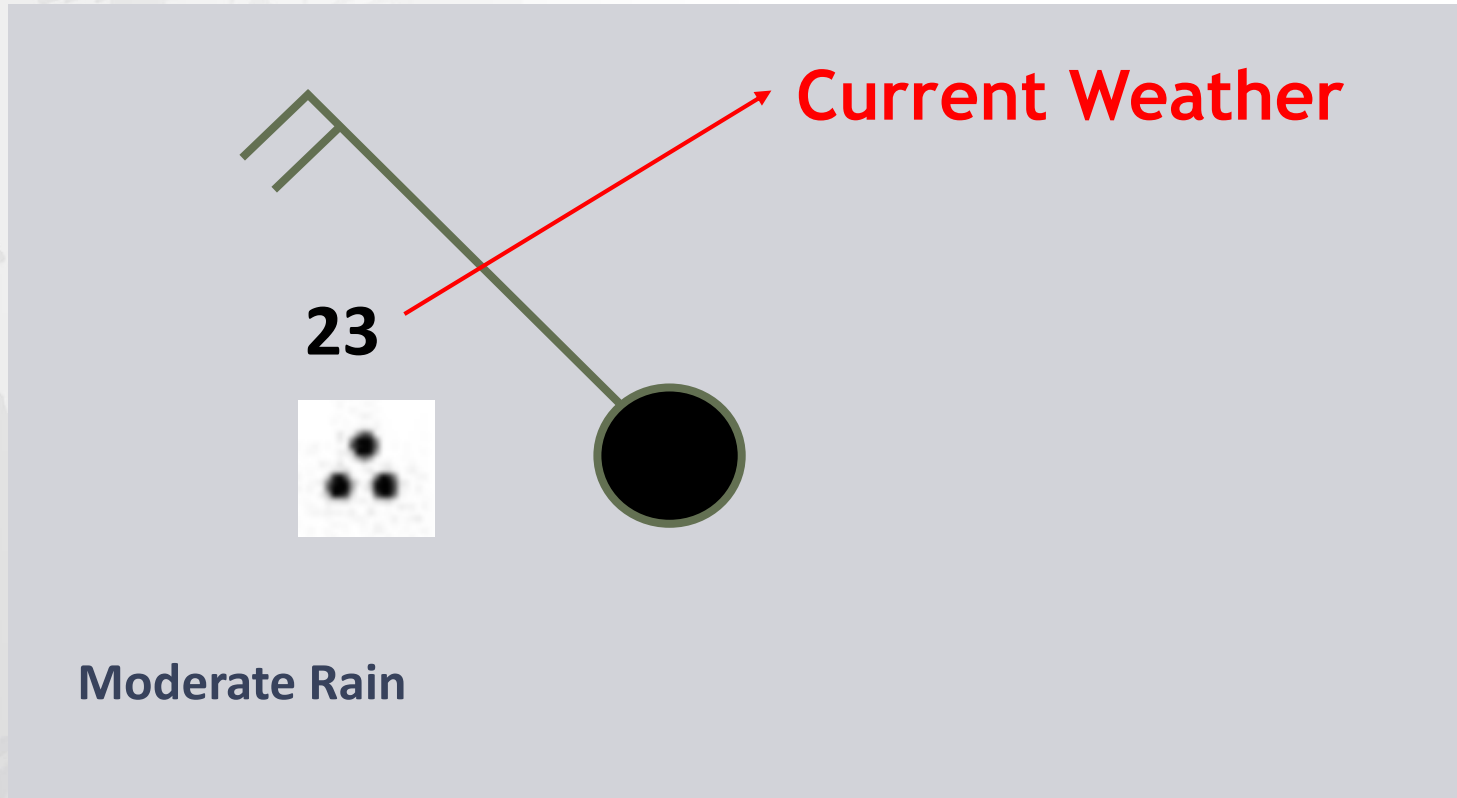
Speed (knots)	Symbol	Speed (knots)	Symbol
Less than 1	☉	33-37	☰—○
1-2	—○	38-42	☰☰—○
3-7	☰—○	43-47	☰☰☰—○
8-12	☰☰—○	48-52	☰☰☰☰—○
13-17	☰☰☰—○	53-57	☰☰☰☰☰—○
18-22	☰☰☰☰—○	58-62	☰☰☰☰☰☰—○
23-27	☰☰☰☰☰—○	98-102	☰☰☰☰☰☰☰—○
28-32	☰☰☰☰☰☰—○	103-107	☰☰☰☰☰☰☰☰—○

Station Model



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Less than 1	☉	33–37	☰—○
1–2	—○	38–42	☰☰—○
3–7	☰—○	43–47	☰☰☰—○
8–12	☰☰—○	48–52	☰☰☰☰—○
13–17	☰☰☰—○	53–57	☰☰☰☰☰—○
18–22	☰☰☰☰—○	58–62	☰☰☰☰☰☰—○
23–27	☰☰☰☰☰—○	98–102	☰☰☰☰☰☰☰—○
28–32	☰☰☰☰☰☰—○	103–107	☰☰☰☰☰☰☰☰—○

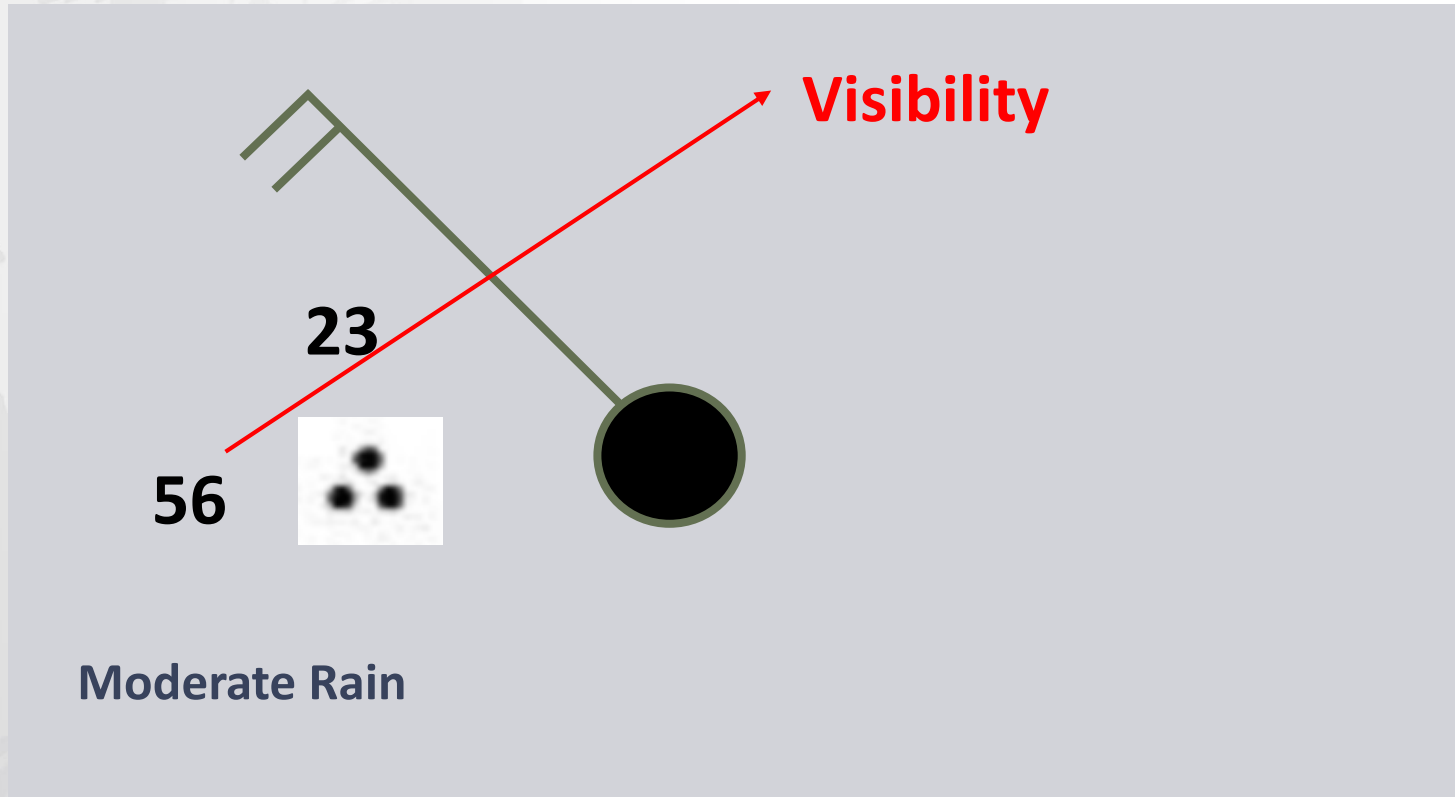
Station Model



The diagram shows a station model on a grey background. It includes a wind barb pointing towards the top-left, the temperature '23', a small square icon containing three black dots representing moderate rain, and a large black circle representing the current weather. A red arrow points from the text 'Current Weather' to the black circle.

••	•••	••••	Rain (light,moderate,heavy)
**	**•	**••	Snow (light,moderate,heavy)
⊃	⊃•	⊃••	Thunder (with rain,snow,no precipitation)
	▽	▽•	Shower (rain,snow)
		••	Drizzle
∞	∞•		Freezing rain, Freezing drizzle
		△	Ice pellets/Sleet
=	≡		Fog (shallow,deep)
	∞		Haze

Station Model



- In either meters or kilometres
- Visibilities below five kilometres are recorded to the nearest 100 metres
- Visibilities above five kilometres are given to the nearest kilometer

(0-50)----- (0.0-5.0 km)

(56-80)----- (06-30 km)

(81-88)----- (35-70 km)

Station Model

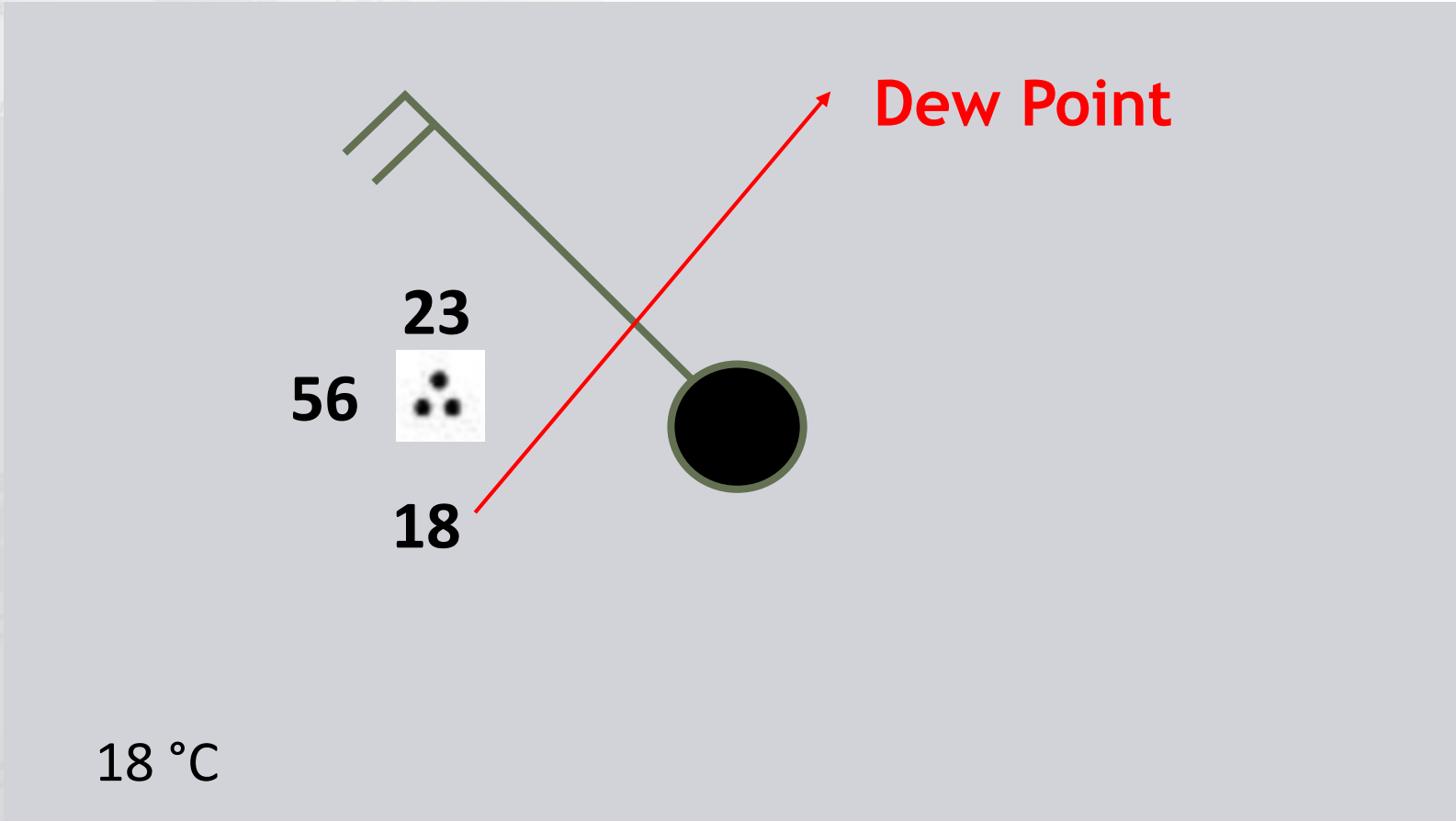
Table 1: Codes for visibilities of less than five kilometres

Code	Distance (km)	Code	Distance (km)	Code	Distance (km)
00	<0.0	19	1.9	38	3.8
01	0.1	20	2.0	39	3.9
02	0.2	21	2.1	40	4.0
03	0.3	22	2.2	41	4.1
04	0.4	23	2.3	42	4.2
05	0.5	24	2.4	43	4.3
06	0.6	25	2.5	44	4.4
07	0.7	26	2.6	45	4.5
08	0.8	27	2.7	46	4.6
09	0.9	28	2.8	47	4.7
10	1.0	29	2.9	48	4.8
11	1.1	30	3.0	49	4.9
12	1.2	31	3.1	50	5.0

Table 2: Codes for visibilities of more than five kilometres

Code	Distance (km)	Code	Distance (km)
56	6	73	23
57	7	74	24
58	8	75	25
59	9	76	26
60	10	77	27
61	11	78	28
62	12	79	29
63	13	80	30
64	14	81	35
65	15	82	40
66	16	83	45
67	17	84	50
68	18	85	55
69	19	86	60
70	20	87	65
71	21	88	70
72	22	89	>70

Station Model

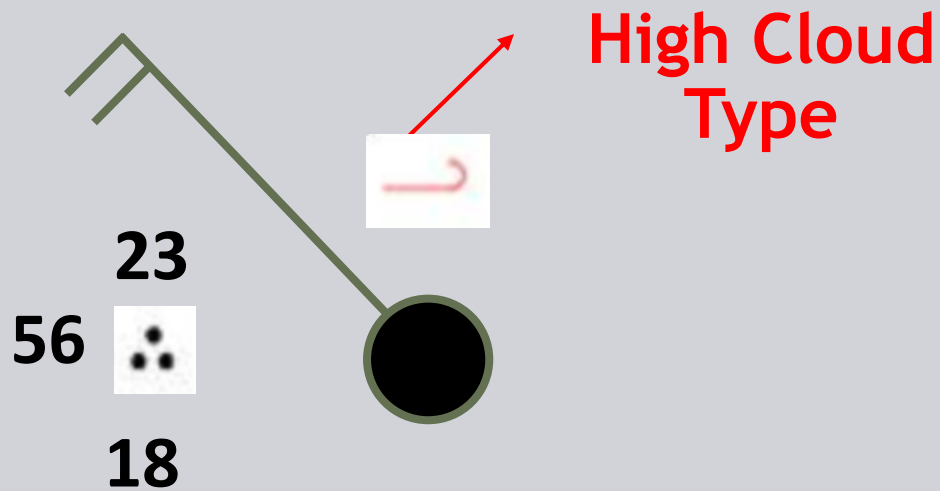


- In either meters or kilometres
- Visibilities below five kilometres are recorded to the nearest 100 metres
- Visibilities above five kilometres are given to the nearest kilometer

(0-50)----- (0.0-5.0 km)
 (56-80)----- (06-30 km)
 (81-88)----- (35-70 km)

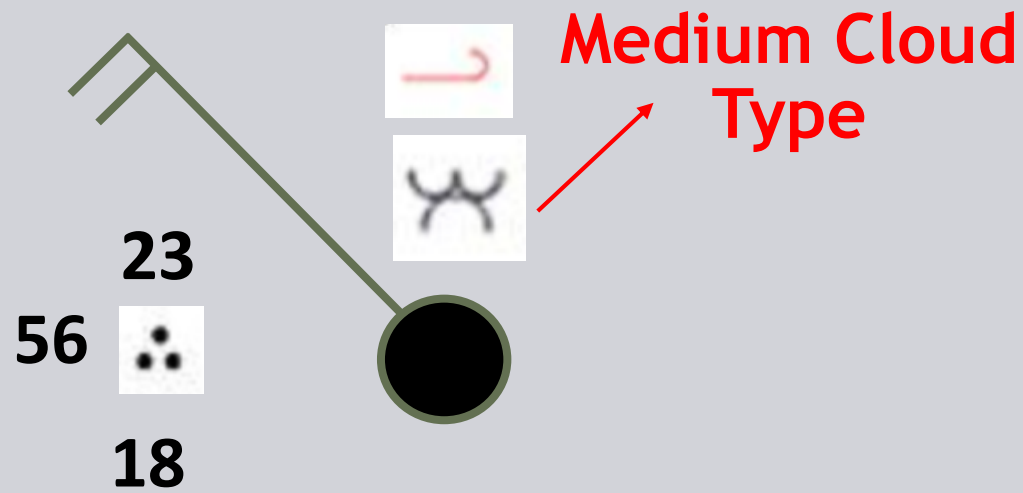


Station Model



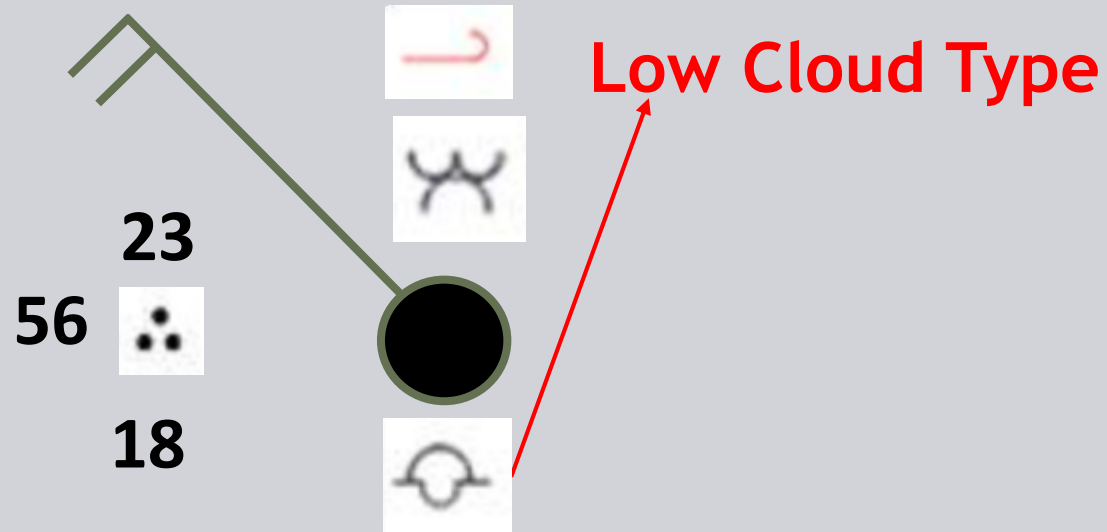
- ↪ Cirrus in the form of filaments, strands or hooks, not progressively invading the sky.
- ↪ Dense cirrus in patches, which do not increase and seem to be the remains of the upper part of cumulonimbus; or cirrus with sproutings in the form of small turrets or battlements.
- ↪ Dense cirrus, often in the form of an anvil; being the remains of the upper parts of cumulonimbus.
- ↪ Cirrus in the form of hooks or of filaments, or both, progressively invading the sky, they generally become denser as a whole.
- ↪ Cirrus and cirrostratus, or cirrostratus alone; progressively invading the sky, but not reaching 45° above the horizon.
- ↪ Cirrus and cirrostratus, or cirrostratus alone; progressively invading the sky, reaching more than 45° above the horizon, but without the sky being totally covered.
- ↪ Veil of cirrostratus covering the celestial dome.
- ↪ Cirrostratus not progressively invading the sky and not completely covering the celestial dome.
- ↪ Cirrocumulus alone, or cirrocumulus accompanied by cirrus or cirrostratus or both, but cirrocumulus is predominant.










Station Model



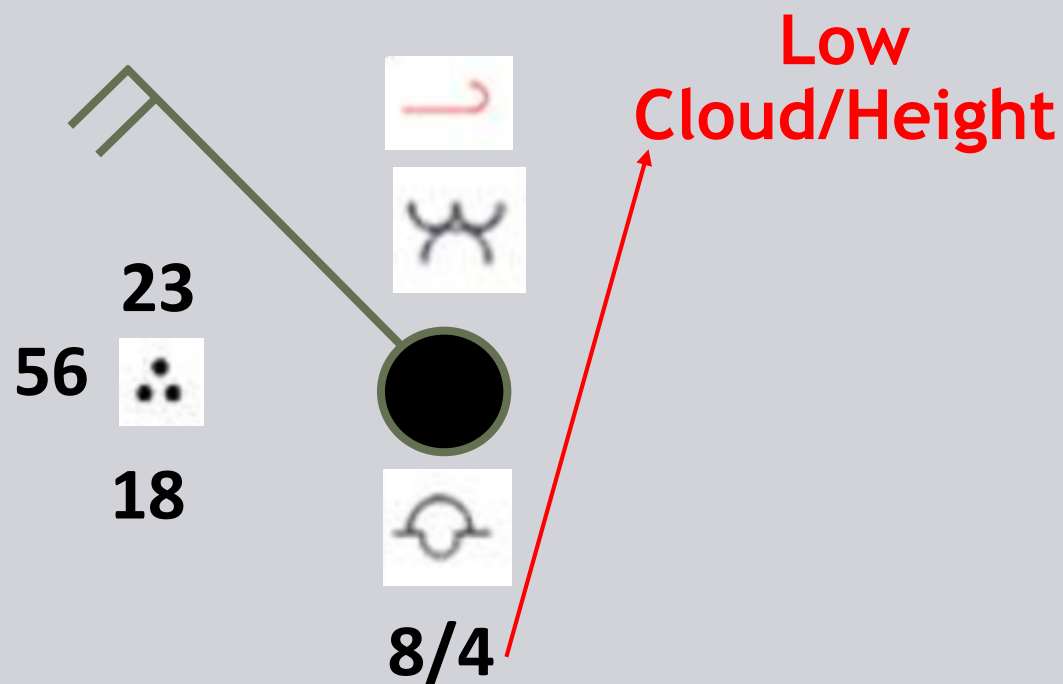
- ↪ Cirrus in the form of filaments, strands or hooks, not progressively invading the sky.
- ↪ Dense cirrus in patches, which do not increase and seem to be the remains of the upper part of cumulonimbus; or cirrus with sproutings in the form of small turrets or battlements.
- ↪ Dense cirrus, often in the form of an anvil; being the remains of the upper parts of cumulonimbus.
- ↪ Cirrus in the form of hooks or of filaments, or both, progressively invading the sky, they generally become denser as a whole.
- ↪ Cirrus and cirrostratus, or cirrostratus alone; progressively invading the sky, but not reaching 45° above the horizon.
- ↪ Cirrus and cirrostratus, or cirrostratus alone; progressively invading the sky, reaching more than 45° above the horizon, but without the sky being totally covered.
- ↪ Veil of cirrostratus covering the celestial dome.
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- ↪ Cirrocumulus alone, or cirrocumulus accompanied by cirrus or cirrostratus or both, but cirrocumulus is predominant.

Station Model



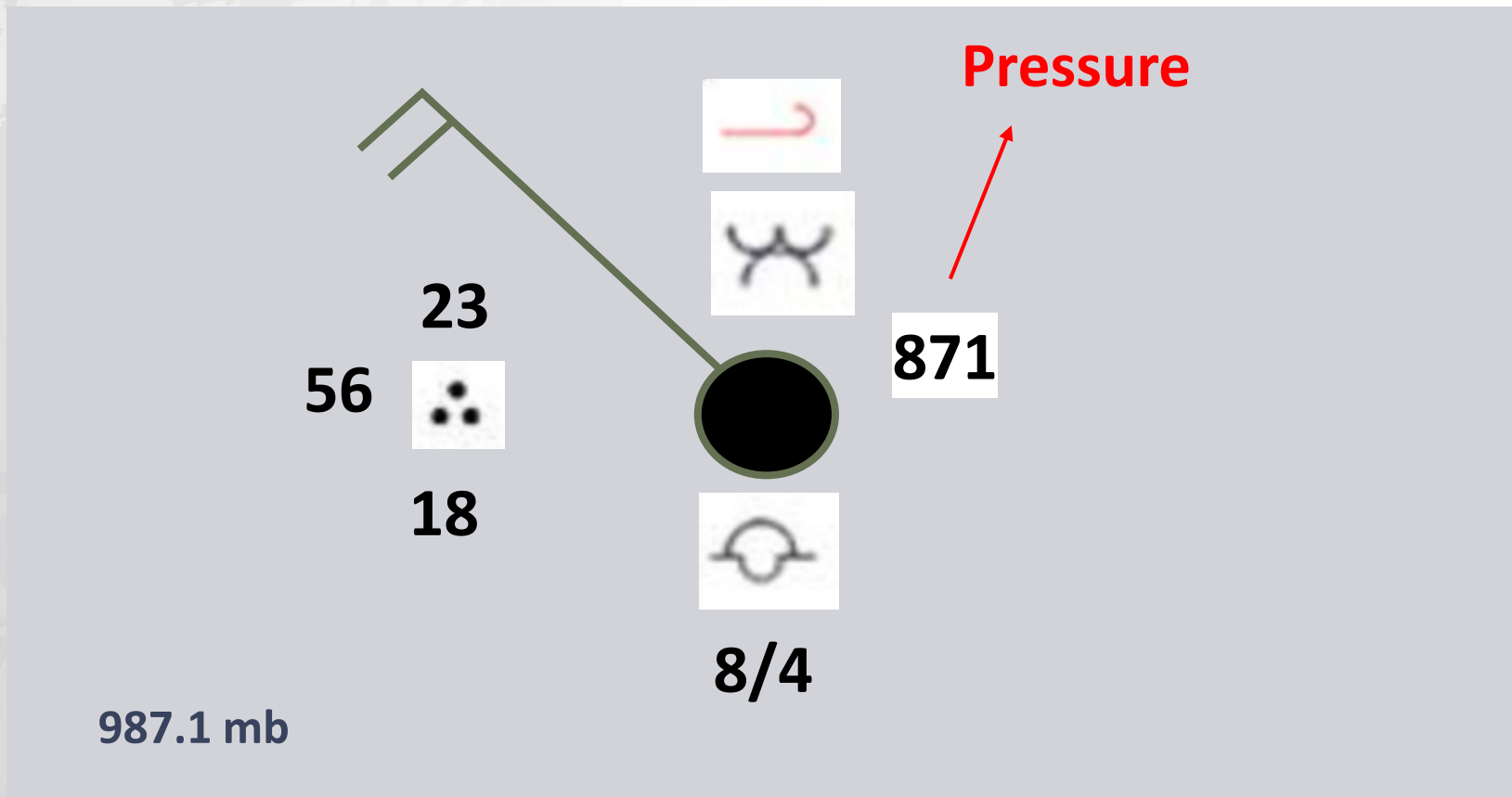
-  Cumulus with little vertical extent
-  Cumulus of moderate or strong vertical extent,
-  Cumulonimbus without fibrous or anvil top
-  Stratocumulus formed by the spreading out of cumulus
-  Stratocumulus not resulting from the spreading out of cumulus
-  Stratus in a more or less continuous sheet or layer.,
-  Stratus fractus of bad weather
-  Cumulus and stratocumulus at a different levels
-  Cumulonimbus, fibrous or anvil top

Station Model



Cloud heights for manned stations	
Code	Height in feet
0	0-149
1	150-299
2	300-599
3	600-999
4	1,000-1,999
5	2,000-2,999
6	3,000-4,999
7	5,000-6,499
8	6,500-7,999
9	8,000 or above
/	Cloud height unknown

Station Model

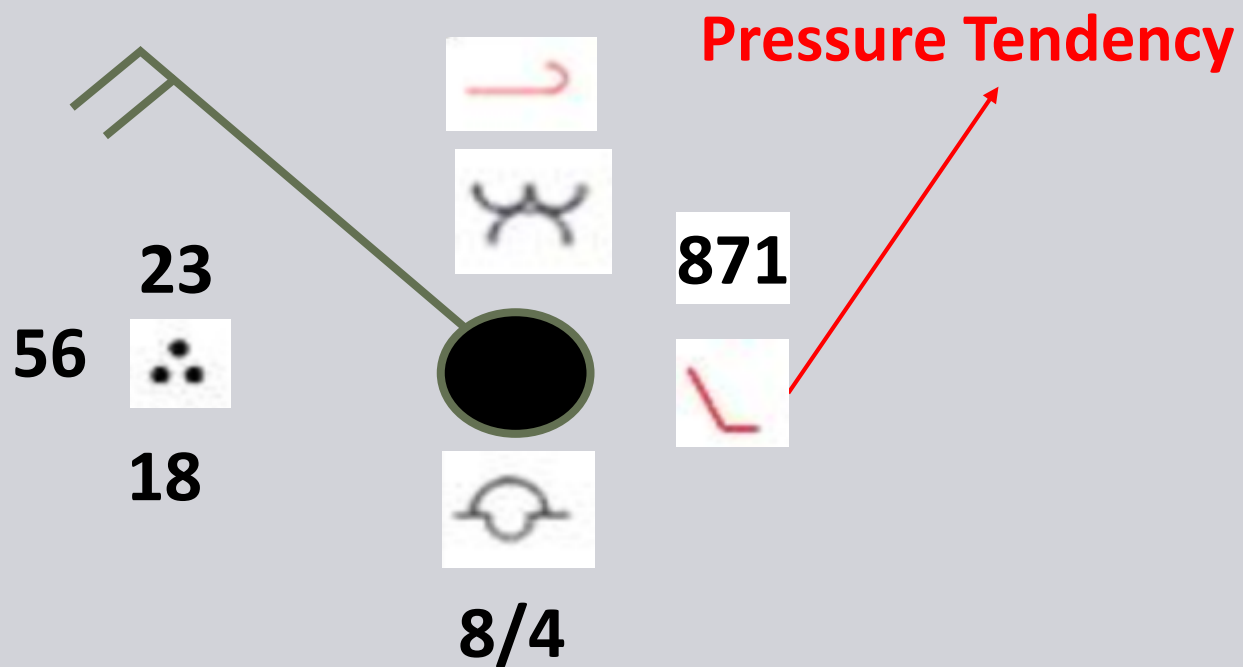



- Pressure is recorded in millibars and tenths and the last three digits are plotted

(0-4)----- Add 10 and point

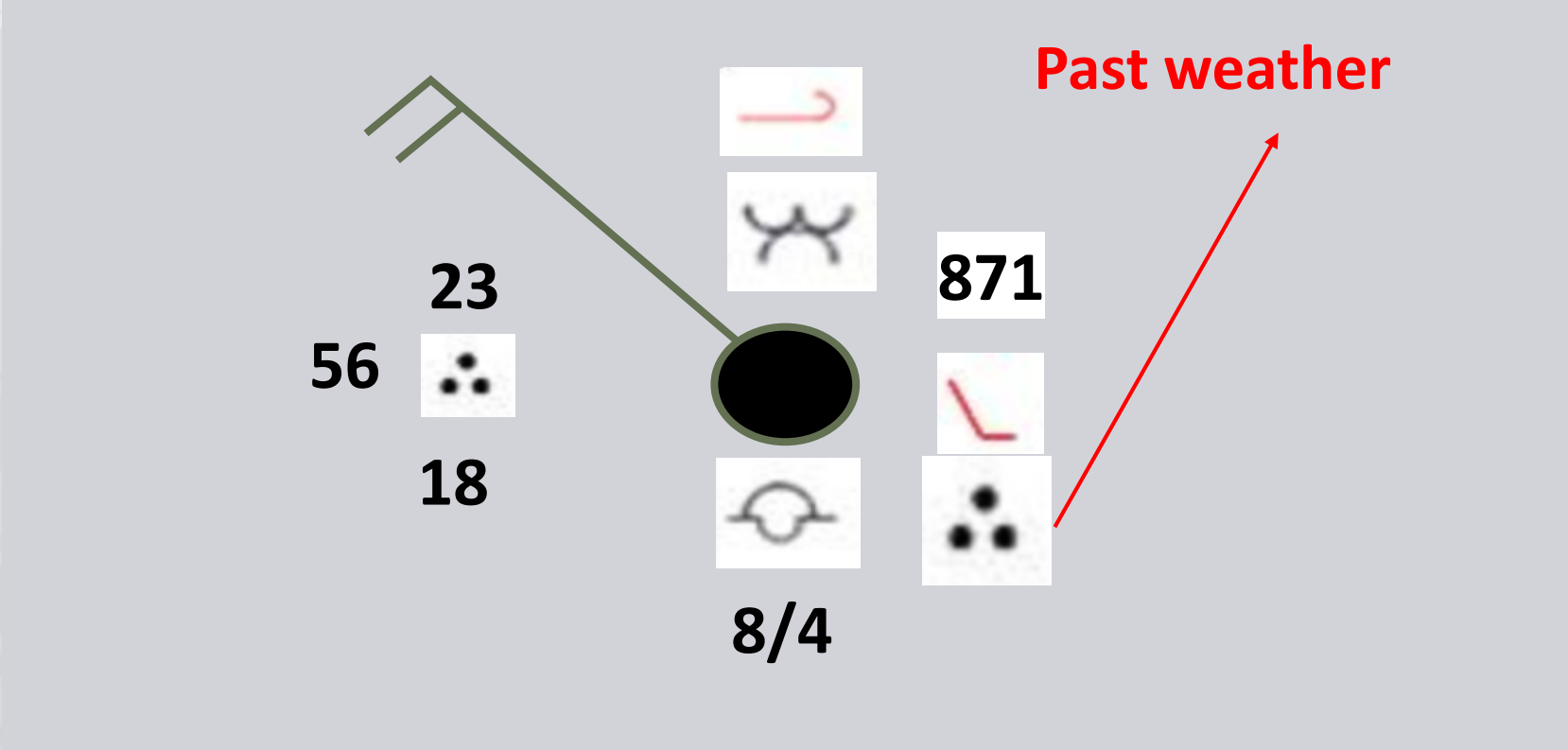
(5-9)----- Add 9 and point

Station Model



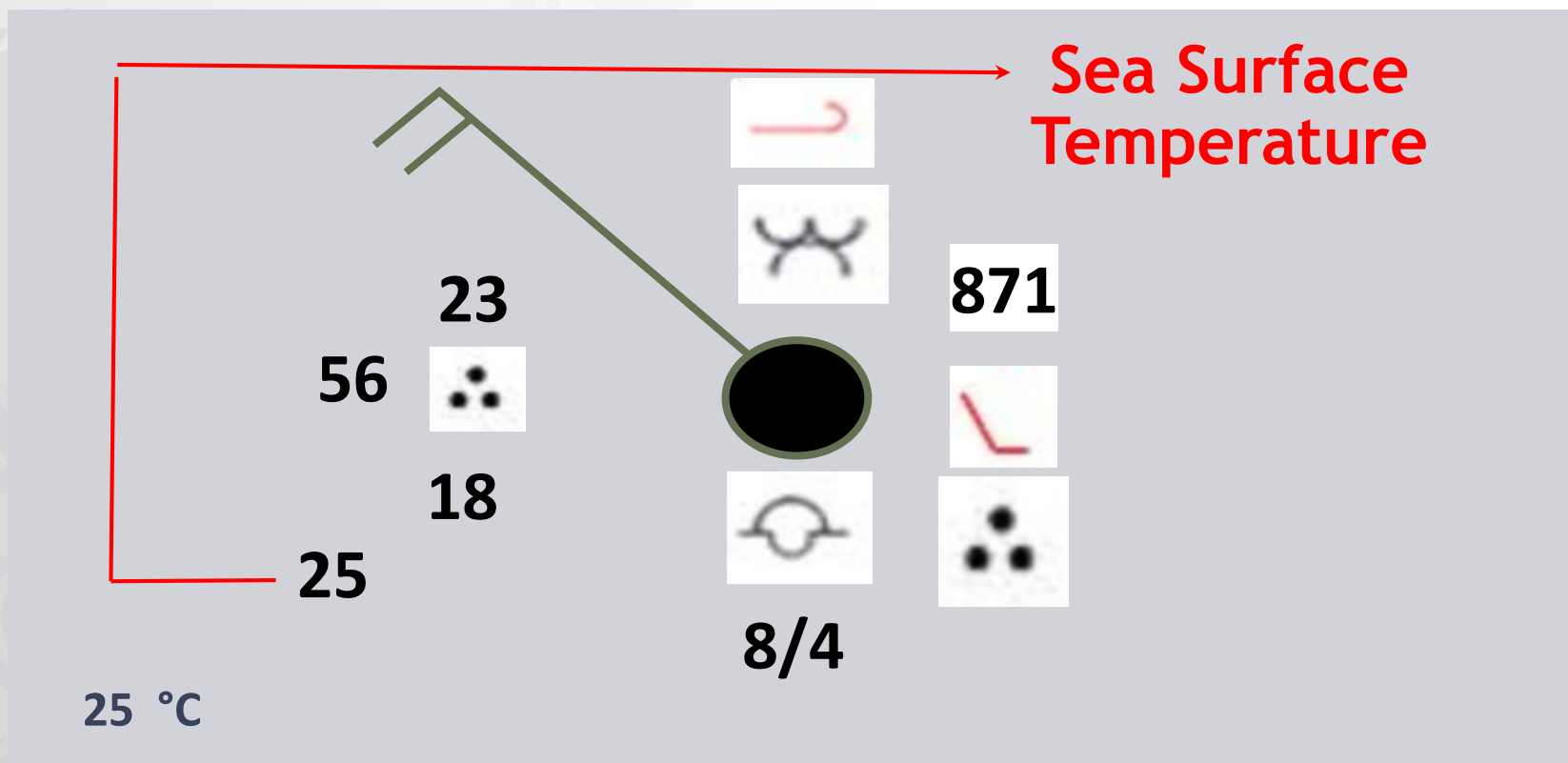
	Continuously falling		Continuously rising
	Falling, then steady		Rising, then steady
	Falling before a lesser rise		Falling before a greater rise
	Rising before a greater fall		Rising before a lesser fall
		Steady	

Station Model



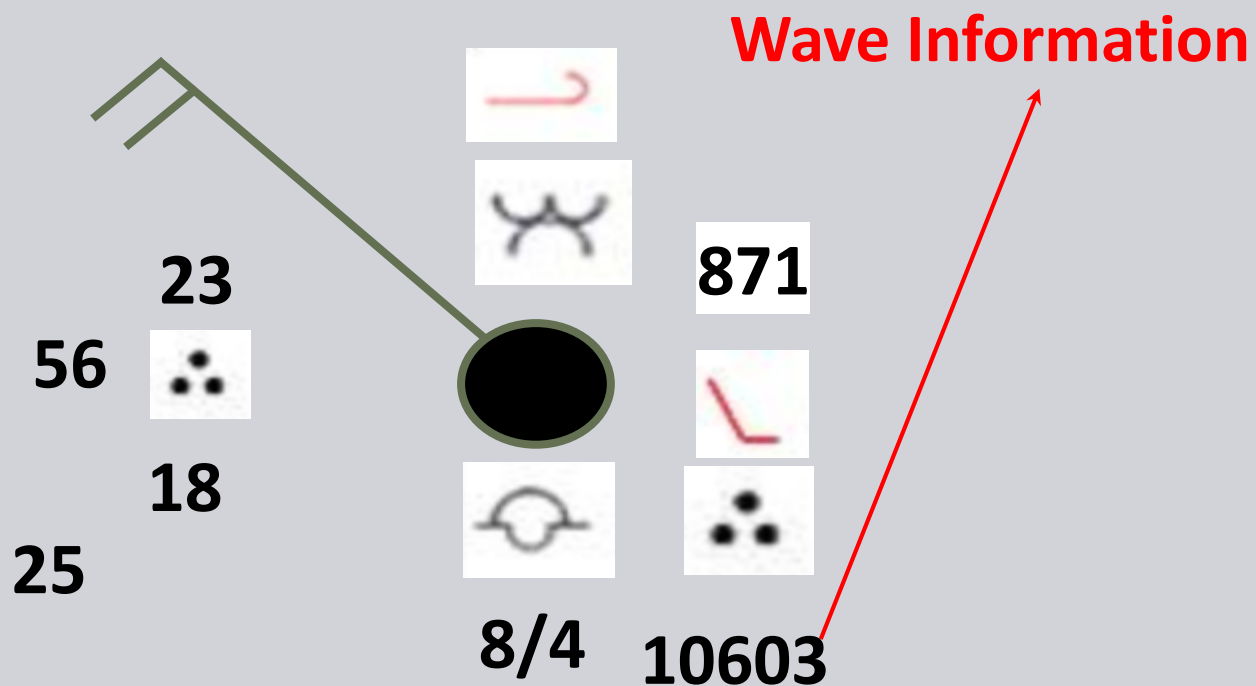
..	⋯	⋯	Rain (light, moderate, heavy)
**	**	**	Snow (light, moderate, heavy)
⊠	⊠	⊠	Thunder (with rain, snow, no precipitation)
∇	∇	∇	Shower (rain, snow)
	”	”	Drizzle
∞	∞	∞	Freezing rain, Freezing drizzle
	△	△	Ice pellets/Sleet
=	≡	≡	Fog (thin, thick)
	∞	∞	Haze

Station Model



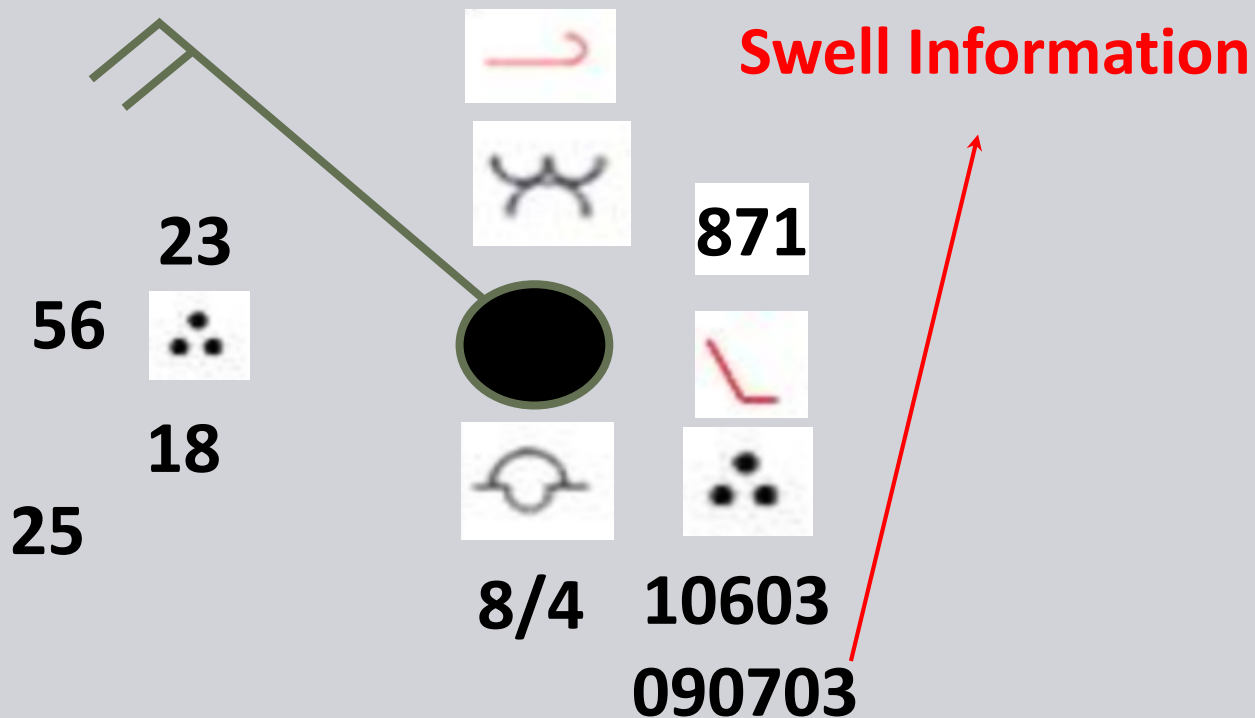
••	•••	••••	Rain (light, moderate, heavy)
**	**•	**••	Snow (light, moderate, heavy)
⊙	⊙•	⊙••	Thunder (with rain, snow, no precipitation)
▽	▽•	▽••	Shower (rain, snow)
	”	”	Drizzle
∞	∞	∞	Freezing rain, Freezing drizzle
	△	△	Ice pellets/Sleet
=	≡	≡	Fog (thin, thick)
	∞	∞	Haze

Station Model



- 1:** Group Identifier (Bouey)
- 06:** Wave Period 6 Seconds
- 03:** Wave Height 3 Half meters
- 2:** Group Identifier (Ship)

Station Model

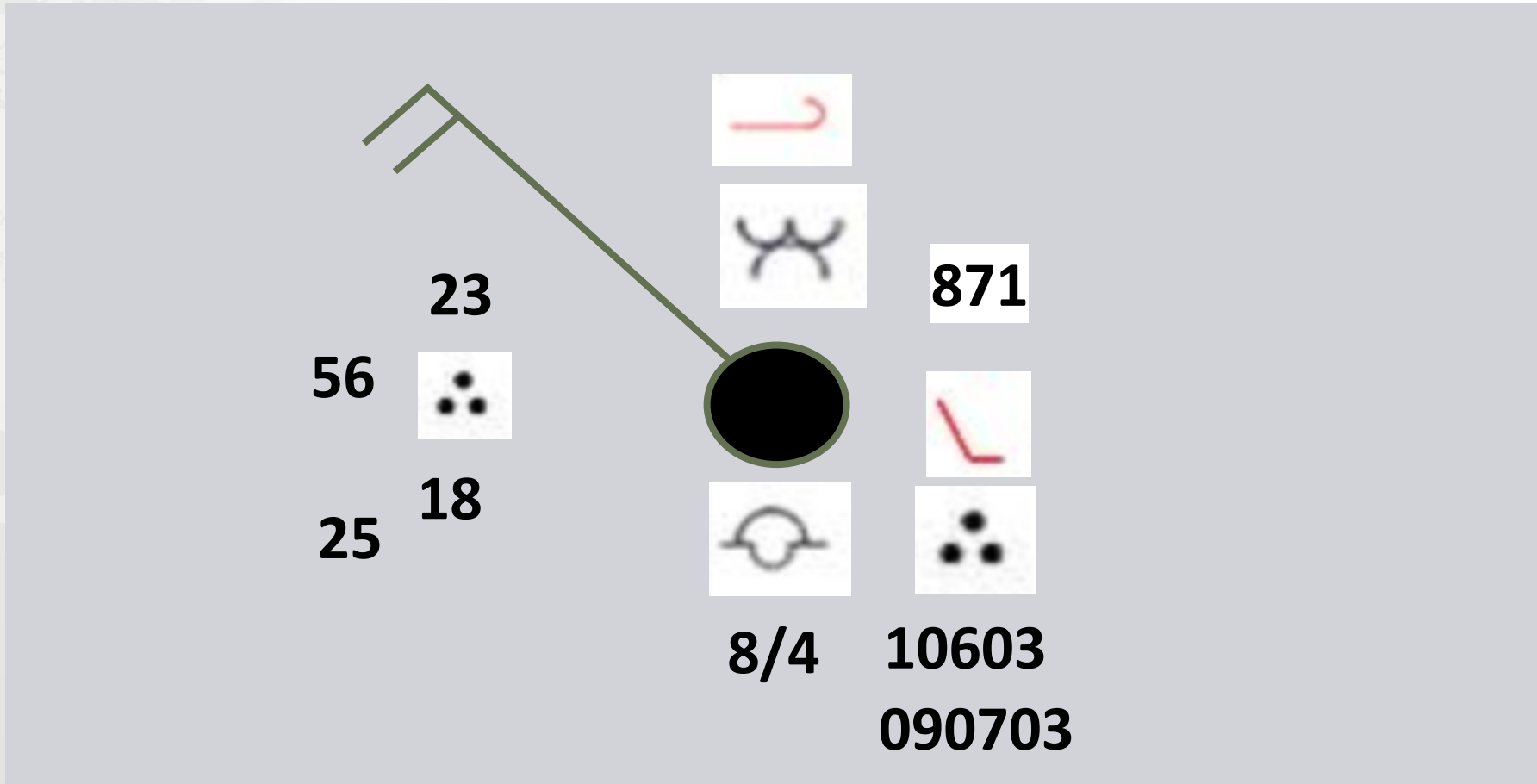


09: Swell Direction (From 90°)

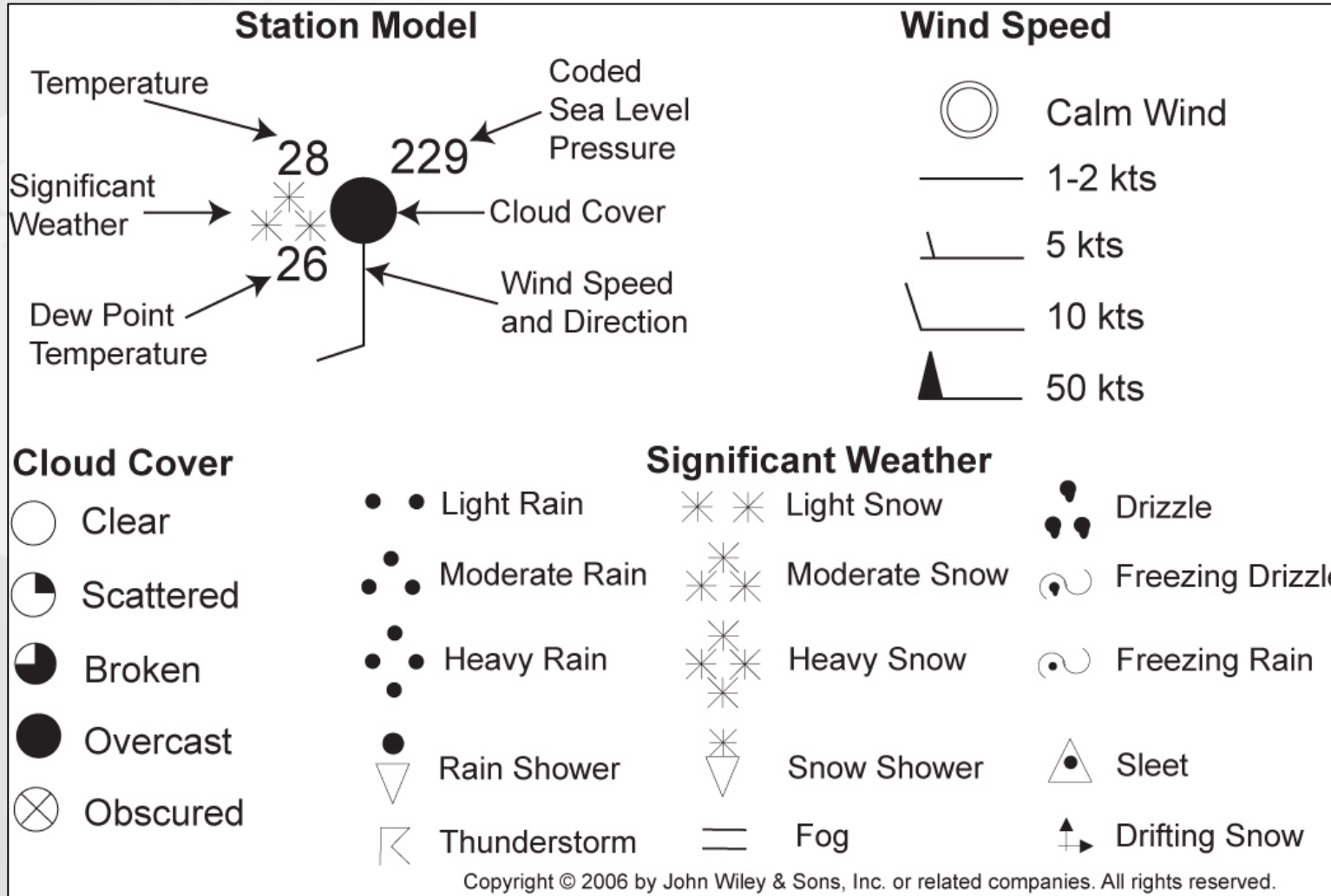
07: Swell Period 7 Seconds

03: Swell Height 3 Half meters

Station Model



Summery



Thanks