

## SYMBOLS FOR SIGNIFICANT WEATHER

	THUNDERSTORMS
	TROPICAL CYCLONE
	SEVERE LINE SQUALL
	HAIL
	MODERATE TURBULENCE
	SEVERE TURBULENCE
	MOUNTAIN WAVES
	LIGHT AIRCRAFT ICING
	MODERATE AIRCRAFT ICING
	SEVERE AIRCRAFT ICING
	FREEZING PRECIPITATION
	WIDESPREAD FOG
	DRIZZLE
	RAIN
	SNOW
	SHOWER
	SEVERE SAND OR DUST HAZE
	WIDESPREAD SANDSTORM OR DUSTSTORM
	WIDESPREAD HAZE
	WIDESPREAD MIST
	WIDESPREAD SMOKE
	WIDESPREAD BLOWING SNOW
	VOLCANIC ERUPTION
	RADIOACTIVE MATERIALS IN THE AIR
	MOUNTAIN OBSCURATION
	VISIBLE ASH CLOUD

## CRITERIA FOR SIGMET INFORMATION

### At subsonic cruising levels:

- Thunderstorm (OBSC, EMBD, SQL, FRQ) - TS
- Thunderstorm with hail - TS GR
- Tropical cyclone - TC (+cyclone name)
- Severe turbulence - SEV TURB
- Severe icing and severe icing due to freezing rain - SEV ICE (FZRA)
- Severe mountain waves - SEV MTW
- Heavy sandstorm/duststorm - HVY SS/DS
- Volcanic ash - VA (+volcano name)

### At transonic levels and supersonic cruising levels:

- Moderate or severe turbulence - MOD, SEV TURB
- Cumulonimbus - (ISOL, OCNL, FRQ) CB
- Hail - GR
- Volcanic ash - VA (+ volcano name)

The following dimensional units and symbols are used throughout this report:

## ICAO TABLE OF DIMENSIONAL UNITS

Dimensions	UNITS
Distances	NAUTICAL MILES and TENTHS
Altitudes heights	FEET
Horizontal speed	KNOTS
Vertical speed	METRES PER SECOND
Wind speed	KNOTS
Wind direction for landing and taking-off	DEGREES MAGNETIC
Wind direction for all other purposes	DEGREES TRUE
Cloud altitude and height	FEET
Visibility	KILOMETRES or METRES
Altimeter setting	HEKTOPASCAL
Temperature	CENTIGRADE
Time	HOURS and MINUTES the day of 24 hours beginning at midnight U.T.C.

## SYMBOLS USED FOR SIGNIFICANT WEATHER CHARTS

	Cold front at the surface		Tropopause level
	Warm front at the surface		Position, speed and level of max. wind
	Occluded front at the surface		Convergence line
	Quasi-stationary front at the surface		Freezing level
	Movement of frontal system (in knots)		Intertropical convergence zone
	Tropopause High		CAT areas
	Tropopause Low		State of the sea
	Area of significant weather		Sea surface temperature

### Axes of Jetstream



The double bar denotes changes of level by 3000ft and/or wind speeds by 37km/h-20kt. In the example, at the double bar the wind speed is 225km/h-120kt. The heavy line delineating the jet axis begins/ends at the points where a wind speed of 150km/h-80kt is forecast. The vertical depths to the 80kt wind field above and below the jetstream core is indicated in hundreds of feet. Vertical depth forecasts are included when the maximum speed is 120kt or more.

## ABBREVIATION USED TO DESCRIBE CLOUDS

### TYPE

high/medium	low	vertical extension
AC = Altocumulus	CU = Cumulus	CB = Cumulonimbus
AS = Altostratus	SC = Stratocumulus	NS = Nimbostratus
CC = Cirrocumulus	ST = Stratus	TCU = Towering Cumulus
CI = Cirrus		
CS = Cirrostratus		

### AMOUNT

Clouds except CB	SKC	= sky clear (0/8)
	FEW	= few (1/8 to 2/8)
	SCT	= scattered (3/8 to 4/8)
	BKN	= broken (5/8 to 7/8)
	OVC	= overcast (8/8)
	ISOL	= individual CBs (isolated)
CB only	OCNL	= well-separated CBs (occasional)
	FRQ	= CBs with little or no separation (frequent)
	EMBD	= CBs embedded in layers of other clouds or concealed by haze (embedded)

### HEIGHTS

Heights are indicated on SWH and SWM charts in flight levels (FL), top over base. When XXX is used, tops or bases are outside the layer of the atmosphere to which the chart applies.

In SWL charts:

- i) heights are indicated as altitudes above mean sea level
- ii) the abbreviation SFC is used to indicate ground level

## DEPICTING OF LINES AND SYSTEMS ON SPECIFIC CHARTS

### MODELS SWH AND SWM - Significant weather charts (high and medium)


Scalloped line	= demarcation of areas of significant weather
Broken line	= delineation of area of CAT
Heavy solid line interrupted by wind arrow and flight level	= position of jet stream axis with indication of wind direction, speed in kt or km/h and height in flight levels
Figures on arrows	= speed in kt or km/h of movement of frontal system
Flight levels inside small rectangles	= height in flight levels of tropopause at spot locations e.g. [340]. Low and High points of the tropopause topography are indicated by the letters L or H respectively inside a pentagon with the height in flight levels.

### MODEL SWL - Significant weather chart (low level)

X	= position of pressure centres given in hectopascals
L	= centre of low pressure
H	= centre of high pressure
Scalloped lines	= demarcation of area of significant weather
Dashed lines	= altitude of 0°C isotherm in feet (hectofoot) or metres Note: 0°C level may also be indicated by [0°:060] i.e. 0°C level is at an altitude of 6000ft
Figures on arrows	= speed in kt or km/h of movement of frontal systems, depressions or anticyclones

## ARROWS AND FEATHERS

Arrows indicate direction. Number of pennants and/or feathers correspond to speed.

EXAMPLE:  280°/115 kt (equivalent to 213 km/h)  
Pennants correspond to 50 kt or 93 km/h  
Feathers correspond to 10 kt or 18 km/h  
Half feathers correspond to 5 kt or 9 km/h

## ABBREVIATIONS

BECMG	BECOMING
BTN	BETWEEN
CAT	CLEAR AIR TURBULENCE
CLD	CLOUD
CONS	CONTINUOUS
CUF	CUMULIFORM
DUC	DENSE UPPER CLOUD
EMBD	EMBEDDED
ENRT	EN ROUTE
FBL	LIGHT
FCST	FORECAST
FM	FROM
FRQ	FREQUENT
GND	GROUND
HVY	HEAVY
INC	IN CLOUDS
INTSF	INTENSIFYING
INTST	INTENSITY
ISOL	ISOLATED
JTST	JET STREAM
LOC	LOCALLY
SQL	SQUALL LINE
LYR	LAYER OR LAYERED
MOD	MODERATE
MON	ABOVE MOUNTAINS
MOV	MOVING
NC	NO CHANGE
NOSIG	NO SIGNIFICANT CHANGE
NSC	NIL SIGNIFICANT CLOUDS
NSW	NIL SIGNIFICANT WEATHER
OBS	OBSERVED
OBSC	OBSCURED
OCNL	OCCASIONALLY
OTLK	OUTLOOK
PROB	PROBABILITY
SEV	SEVERE
SFC	SURFACE
STF	STRATIFORM
TEMPO	TEMPORARY
TL	TILL
VAL	IN VALLEYS
WDSPR	WIDESPREAD
WKN	WEAKENING
WS	WINDSHEAR

## DECODING OF SIGNIFICANT PRESENT AND FORECAST WEATHER

### INTENSITY

"-" (light); no indicator (moderate); "+" [heavy or well-developed in the case of dust/sand whirls (dust devils) and funnel clouds] are used to indicate the present and forecast intensity of certain phenomena.

### DESCRIPTORS

BC - patches	FZ - freezing (supercooled)	SH - shower(s)
BL - blowing	MI - shallow	TS - thunderstorm
DR - low drifting	PR - partial	VC - in the vicinity

### FORECAST WEATHER ABBREVIATIONS

PRECIPITATION	OBSERVATION	OTHER
DZ - drizzle	BR - mist	DS - duststorm
GR - hail	DU - widespread dust	FC - funnel cloud(s) (tornado or waterspout)
GS - small hail and/or snow pellets	FG - fog	PO - dust/sand whirls (dust devils)
IC - ice crystals (diamond dust)	FU - smoke	SQ - squall
PL - ice pellets	HZ - haze	SS - sandstorm
RA - rain	SA - sand	
SG - snow grains	VA - volcanic ash	
SN - snow		

### EXAMPLES

+SHRA - heavy shower of rain	TSSN - moderate snow with thunderstorm
FZDZ - moderate freezing drizzle	SNRA - moderate snow and rain
+TSSNGR - heavy snow and hail with thunderstorm	-SHSN - light shower of snow

### CAVOK - CLOUD AND VISIBILITY OK

Replaces visibility, present weather and cloud if:

- 1) Visibility is 10km or more
- 2) No cumulonimbus cloud and no cloud below 1500m (5000ft) or below the highest minimum sector altitude whichever is greater, and
- 3) No significant weather to aviation

### RUNWAY STATE GROUP DrDr Er Cr erer BrBr

#### DrDr RUNWAY DESIGNATOR

(in case of parallel runways 50 is added to the right runway)

- 99 - old report, a new report is not available  
88 - all runways

#### Er TYPE OF DEPOSIT

- 0 - clear and dry  
1 - damp  
2 - wet or water patches  
3 - rime or frost covered <1mm  
4 - dry snow  
5 - wet snow  
6 - slush  
7 - ice  
8 - compacted or rolled snow  
9 - frozen ruts or ridges

#### Cr EXTENT OF RUNWAY CONTAMINATION

- 1 - Less than 10% of runway  
2 - 11% - 25% of runway  
5 - 26% - 50% of runway  
9 - 51% - 100% of runway  
/ - No report (in case of runway cleaning)

### HEIGHT OF DEPOSIT

- 00 - less than 1mm  
01 - 1mm  
02 - 2mm  
etc...  
90 - 90mm  
92 - 10cm  
93 - 15cm  
94 - 20cm  
95 - 25cm  
96 - 30cm  
97 - 35cm  
98 - 40cm or more  
99 - Runway closed due to deposit  
// - Height of deposit not significant

### BrBr FRICTION COEFFICIENT BRAKING ACTION

>0,40	95 good
0,39-0,36	94 medium/good
0,35-0,30	93 medium
0,29-0,26	92 medium/poor
<0,25	91 poor
	99 unreliable
	// Braking action not reported.
	Runway closed

(28 ... means Friction coefficient 0,28)