ISSUED BY ..... METEOROLOGICAL OFFICE (DATE, TIME UTC) .....

INTENSITY

" – " (light); no indicator (moderate); " + " (heavy, or a tornado/waterspout in the case of funnel cloud(s)) are used to indicate the intensity of certain phenomena

DESCRIPTORS

MI – shallow	PR – partial	BL – blowing	TS – thunderstorm
BC – patches	DR – low drifting	SH – shower(s)	FZ – freezing (superccoled)

PRESENT WEATHER ABBREVIATIONS

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

EXAMPLES

+SHRA – heavy shower of rain

FZDZ – moderate freezing drizzle

+TSSNGR – thunderstorm with heavy snow and hail

TSSN – thunderstorm with moderate snow

SNRA – moderate snow and rain

SELECTED ICAO LOCATION INDICATORS

CYUL	Montreal Pierre Elliot Trudeau/Intl	HECA	Cairo/Intl	OBBI	Bahrain Intl
EDDF	Frankfurt/Main	HKJK	Nairobi/Jomo Kenyatta	RJTT	Tokyo Intl
EGLL	London/Heathrow	KJFK	New York/John F. Kennedy Intl	SBGL	Rio de Janeiro/Galeão Intl
GMMC	Casablanca/Anfa	LFPG	Paris/Charles de Gaulle	YSSY	Sydney/Kingsford Smith Intl
		NZAA	Auckland Intl	ZBAA	Beijing/Capital

METAR CYUL 240700Z 27018G30KT 5000 SN FEW020 BKN045 M02/M07 Q0995=

METAR EDDF 240950Z 05015KT 9999 FEW025 04/M05 Q1018 NOSIG=

METAR LFPG 241000Z 07010KT 5000 SCT010 BKN040 02/M01 Q1014 NOSIG=

SPECI GMMC 220530Z 24006KT 5000 –TSGR BKN016TCU FEW020CB SCT026 08/07 Q1013=

TAF AMD NZAA 240855Z 2409/2506 24010KT 9999 FEW030 BECMG 2411/2413 VRB02KT 2000 HZ FM 242200 24010KT CAVOK=

TAF ZBAA 240440Z 2406/2506 13004MPS 6000 NSC BECMG 2415/2416 2000 SN OVC040 TEMPO 2418/24211000 SN BECMG 2500/2501 32004MPS 3500 BR NSC BECMG 2503/2504 32010G20MPS CAVOK=

TAF YSSY 240443Z 2406/2506 05015KT 3000 BR SCT030 BECMG 2414/2416 33008KT FM 2422 04020KT CAVOK=

HECC SIGMET 2 VALID 240900/241200 HECA-

HECC CAIRO FIR SEV TURB OBS N OF N27 FL 390/440 MOV E 25KMH NC.

1. Symbols for significant weather

	Tropical cyclone	,	Drizzle
	Severe squall line*	/// ///	Rain
	Moderate turbulence	*	Snow
	Severe turbulence	▽	Shower △ Hail
	Mountain waves		Widespread blowing snow
	Moderate aircraft icing	S	Severe sand or dust haze
	Severe aircraft icing	S	Widespread sandstorm or duststorm
	Widespread fog	∞	Widespread haze
	Radioactive materials in the atmosphere**	=	Widespread mist
	Volcanic eruption***		Widespread smoke
	Mountain obscuration	~	Freezing precipitation****

* In-flight documentation for flights operating up to FL 100. This symbol refers to "squall line".

** The following information should be included in a separate text box on the chart: radioactive materials in the atmosphere symbol; latitude/longitude of release site; and (if known) the name of the site of the radioactive source. In addition, the legend of SIGWX charts on which a release of radiation is indicated should contain "CHECK SIGMET AND NOTAM FOR RDOACT CLD". The centre of the radioactive materials in the atmosphere symbol should be placed on significant weather charts at the latitude/longitude site of the radioactive source.

*** The following information should be included in a separate text box on the chart: volcanic eruption symbol; the name of the volcano (if known); and the latitude/longitude of the eruption.

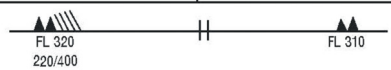
In addition, the legend of SIGWX charts should indicate "CHECK SIGMET, ADVISORIES FOR TC AND VA, AND ASHTAM AND NOTAM FOR VA". The dot on the base of the volcanic eruption symbol should be placed on significant weather charts at the latitude/longitude site of the volcanic event.

**** This symbol does not refer to icing due to precipitation coming into contact with an aircraft which is at a very low temperature.

Note: Height indications between which phenomena are expected, top above base as per chart legend.

2. Fronts and convergence zones and other symbols used

	Cold front at the surface	FL 270	Position, speed and level of maximum wind
	Warm front at the surface		Convergence line
	Occluded front at the surface	0°:100	Freezing level
	Quasi-stationary front at the surface		Intertropical concergence zone
H 460	Tropopause high	10	State of the sea
270 L	Tropopause low	18	Sea-surface temperature
380	Tropopause level	40	Widespread strong surface wind*



Wind arrows indicate the maximum wind in jet and the flight level at which it occurs. If the maximum wind speed is 60 m/s (120 kt) or more, the flight levels between which winds are greater than 40 m/s (80 kt) is placed below the maximum wind level. In the example, winds are greater than 40 m/s (80 kt) between FL 220 and FL 400.

The heavy line delineating the jet axis begins/ends at the points where a wind speed of 40 m/s (80 kt) is forecast.

‡ Symbol used whenever the height of the jet axis changes by +/–3000 ft or the speed changes by +/–20 kt

* This symbol refers to widespread surface wind speeds exceeding 15 m/s (30 kt).

3. Abbreviations used to describe clouds

3.1 Type

CI	= Cirrus	AS	= Altostratus	ST	= Stratus
CC	= Cirrocumulus	NS	= Nimbostratus	CU	= Cumulus
CS	= Cirrostratus	SC	= Stratocumulus	CB	= Cumulonimbus
AC	= Altocumulus				

3.2 Amount

Clouds except CB

FEW	= few (1/8 to 2/8)	BKN	= broker (5/8 to 7/8)
SCT	= scattered (3/8 to 4/8)	OVC	= overcast (8/8)

CB only

ISOL	= individual CBs (isolated)
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)

3.3 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:

(a) Heights are indicated as altitudes above mean sea level;

(b) The abbreviation SFC is used to indicate ground level.

4. Depicting of lines and systems on specific charts

4.1 Models SWH and SWM – Significant weather charts (high and medium)

Scalloped line	=	demarcation of areas of significant weather
Heavy 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 m/s and height in flight levels. The vertical extent of the jet stream is indicated (in flight levels), e.g. FL 270 accompanied by 240/290 indicates that the jet extends from FL 240 to FL 290.
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. Display explicit FL for jet depths and tropopause height even if outside forecast bounds.

4.2 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 (hectofeet) or metres Note: 0°C level may also be indicated by 0°:060, i.e. 0°C level is at an altitude of 6000 ft.
Figures on arrows	=	speed in kt or km/h of movement of frontal systems, depressions or anticyclones
Figure inside the state of the sea symbol	=	total wave height in feet or metres
Figure inside the sea-surface temperature	=	sea-surface temperature in °C
Figures inside the strong surface wind symbol	=	wind in kt or m/s

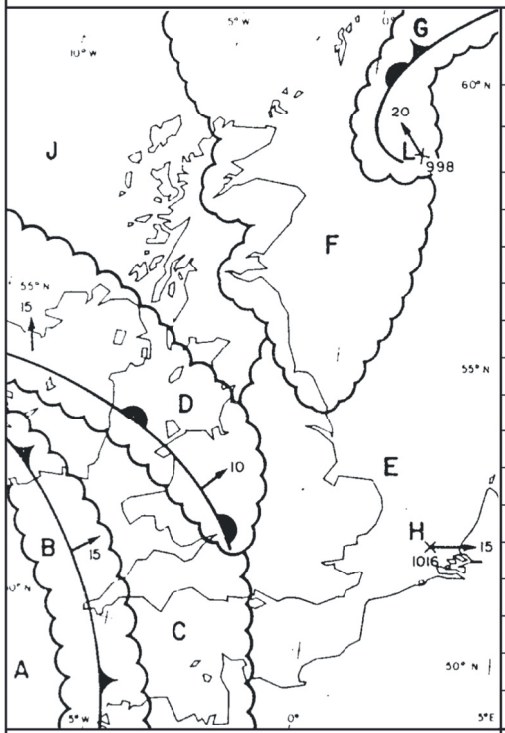
4.3 Arrows, feathers and pennants

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

Example: 270°/115 kt (equivalent to 57.5 m/s)
Pennants correspond to 50 kt or 25 m/s
Feathers correspond to 10 kt or 5 m/s
Half-feathers correspond to 5 kt or 2.5 m/s

* A conversion factor of 1 to 2 is used.

FIXED TIME PROGNOSTIC CHART VALID ..... UTC ..... 20 ..... BASED ON ..... UTC DATA ON .....

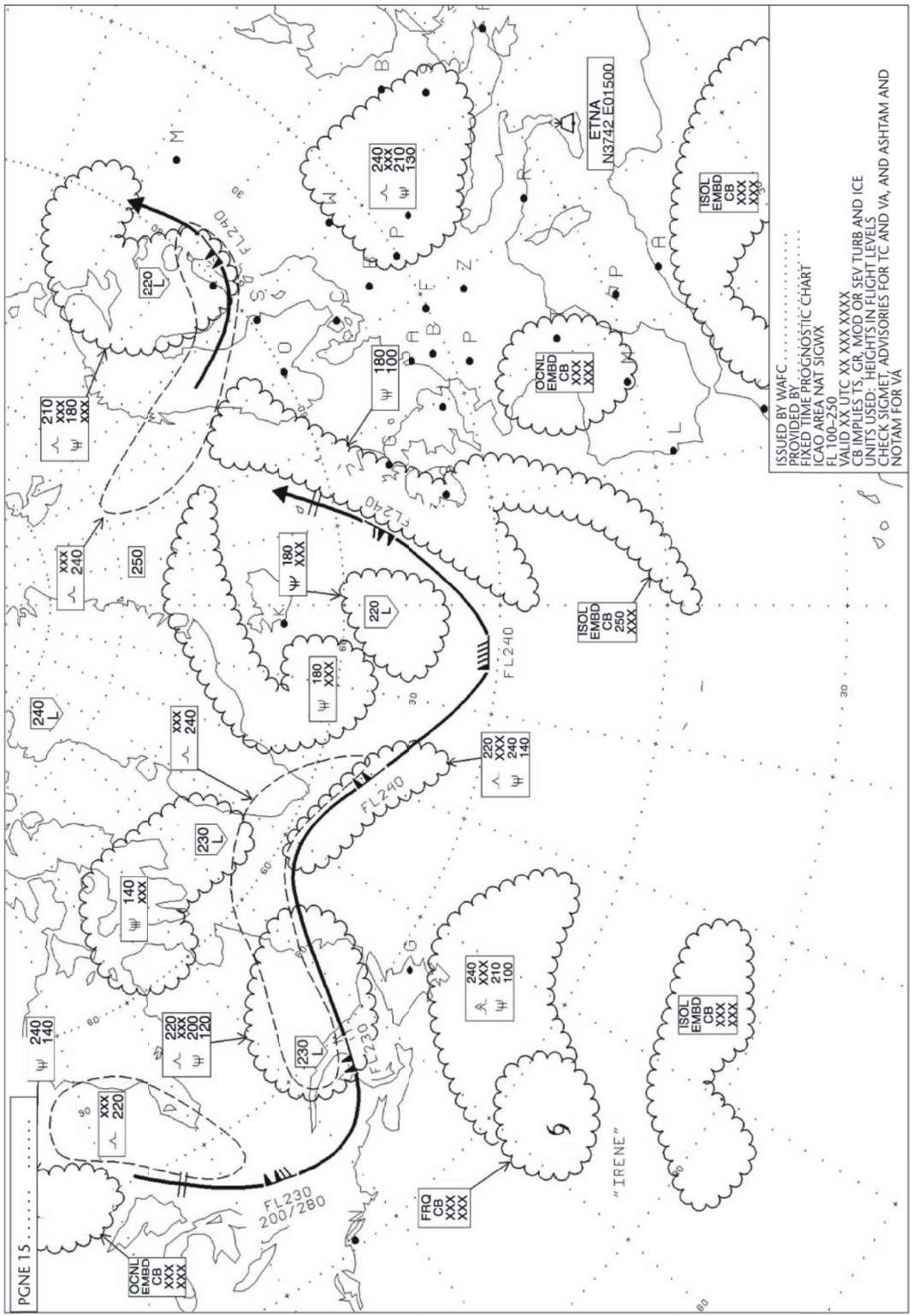


VARIANT	VIS	SIGNIFICANT WEATHER	CLOUD, TURBULENCE, ICING	0°C
AREA A			SCT CU 025/080	50
ISOL			BKN CU 015/XXX 050/XXX	
AREA B			OVC LYR ST NS 015/XXX 050/XXX	50
OCNL	4000	HEAVY RAIN	EMBD CB 008/XXX	
ISOL	1000	THUNDERSTORM		
AREA C			BKN to OVC ST SC 010/040	100
LCA SOUTH COT HILLS	2000	DRIZZLE	OVC ST SC 003/050	
AREA D			OVC LYR SC NS 010/XXX	90
LCA NORTH	4500	RAIN	OVC LYR ST NS 005/XXX 090/XXX	
AREA E			SCT SC 020/030	40
LCA LAND	0500	FOG		
AREA F	2000	MIST	BKN to OVC ST 002/010	30
LCA COT HILLS	0200	FOG	OVC ST SFC/015	
AREA G	4500	RAIN	OVC CU SC NS 010/XXX 030/XXX	30
LCA NORTH	0500	FOG	OVC ST SFC/010	
AREA J			SCT CU SC 030/050	40
LCA HILLS NORTH			BLW 070	

SIGWX SFC – 10 000 FT
ISSUED BY . . . . . AT . . . . . UTC

Notes:
1. Pressure in hPa and speeds in knots.
2. Vis in m included if less than 5 000 m. implies vis 200 m or less.
3. Altitude in hectofeet above MSL XXX = above 10 000 ft.
4. CB implies MOD/SEV icing, turbulence and thunderstorm.
5. Only significant weather and/or weather phenomena causing visibility reduction below 5 000 m included.

REMARKS:
EAST TO NE GALES SHETLAND TO HEBRIDES - SEVERE MOUNTAIN WAVES NW SCOTLAND –
FOG PATCHES EAST ANGLIA – WDSPR FOG OVER NORTH FRANCE, BELGIUM AND THE NETHERLANDS


PGNE 15
ISSUED BY WAFC
PROVIDED BY
FIXED TIME PROGNOSTIC CHART
ICAO AREA NAT SIGWX
FL 100–250
VALID XX UTC XX XXX XXXX
CB IMPLIES TS, GR, MOD OR SEV TURB AND ICE
UNITS USED – HEIGHTS IN FLIGHT LEVELS
CHECK SIGMET, ADVISORIES FOR TC AND VA, AND ASHTAM AND NOTAM FOR VA
ETNA
N3742 E01500
"IRENE"
FL230
200/280
FL240
OCNL EMBD CB XXX XXX
ISOL EMBD CB XXX XXX
FRQ CB XXX XXX

UPPER WIND AND TEMPERATURE CHART FOR STANDARD ISOBARIC SURFACE **MODEL IS**

Example 2. Arrows, feathers and pennants (Polar stereographic projection)