AERODROME WEATHER REPORT — METAR AND SPECI DECODE

IDENTIFICATION GROUPS	METAR or SPECI		**METAR** – Aviation routine weather report code name **SPECI** – Aviation special weather report code name
	CCCC		ICAO four-letter location indicator
	YYGGggZ		In individual messages, day of the month and time of observation in hours and minutes UTC
			Indicator of UTC
	(AUTO)		Fully automated observation indicator
SURFACE WIND	dddffGf$_m$f$_m$	KMH or KT or MPS	Wind speed units used
			Maximum wind speed (gust) — if necessary
			Indicator of **G**ust — if necessary
			Mean wind speed (ten minute mean or since discontinuity
			Mean wind direction in degrees true rounded off to nearest ten degrees (**VRB** = VARIABLE)
		00000 = calm	
		P199 KMH (P99 KT, P49 MPS) mean ff or f$_m$f$_m$ = 200 KMH (100 KT, 50 MPS) or more	
			Followed when there is a variation in wind direction of 60° or more but less than 180° and wind speed > 3 KT by group below:
			$d_nd_nd_nV d_xd_xd_x$ — Extreme direction of wind
			Indicator of **V**ariability
			Other extreme direction of wind (measured clockwise)
VISIBILITY	VVVV		**Prevailing visibility in meters.** 9999 = 10 km or more
			In AUTO reports followed by NDV (non directional visibility) whenever applicable
			Followed when min. vis. < 1 500 m or less than 50 pct. of prevailing visibility by:
			$V_nV_nV_nV_nD_v$ — Minimum visibility in meters.
			Direction of **minimum** visibility (eight points of compass)
RUNWAY VISUAL RANGE (RVR) WHERE REQUIRED, UP TO FOUR ACTIVE RUNWAYS	RD_RD_R/V$_R$V$_R$V$_R$V$_R$i		Indicator of RVR
			Runway designator — for parallel runways may have **LL**, **L**, **C**, **R** or **RR** appended (**L** = left; **C**=centre; **R** = right)
			RVR (10 minute mean) at the touchdown zone P1500 = more than 1 500 m, M0050 = less than 50 m
			RVR tendency indicator over past ten minutes. **U** = upward; **D** = downward; **N** = no distinct change. **Omitted** if impossible to determine
			Replaced when there are significant variations in RVR by the group below:
			RD_RD_R/V$_R$V$_R$V$_R$V$_R$V$_R$i — Indicator of RVR
			Runway designator — for parallel runways may have **LL**, **L**, **C**, **R** or **RR**
			RVR in metres (one minute mean minimum value during last ten minutes)
			Indicator of significant **V**ariation
			RVR in metres (one minute mean maximum value during last ten minutes)
			RVR tendency indicator
PRESENT WEATHER	w'w'		Present weather (see Table w'w')
CLOUDS*	N$_s$N$_s$N$_s$h$_s$h$_s$h$_s$(cc)		Cloud amount: **FEW** – **FEW** (1–2 oktas); **SCT** – **SCa**T**t**ered (3–4 oktas); **BKN** – Bro**K**e**N** (5–7 oktas); **OVC** – **OV**er**C**ast (8 oktas)
			Height of base of clouds in units of 30 m (100 ft)
			Cloud type — only **CB** (Cumulonimbus) or **TCU** (Towering cumulus) indicated. /// (in AUTO reports only)
			Replaced when sky is obscured and information on vertical visibility is available by the group below:
			VVh$_s$h$_s$h$_s$ — Vertical visibility in units of 30 m (100 ft) /// = Vertical visibility unavailable
			Indicator of Vertical Visibility
			Replaced when there are no such clouds and CAVOK is not appropriate by: **SKC** — Sky Clear
			Replaced when there are no such clouds, no restriction on vertical visibility and CAVOK and SKC are not appropriate by: **NSC** — Nil Significant Cloud
CAVOK			Ceiling **A**nd **V**isibility **OK**. **Replaces** visibility RVR, present weather and cloud if: (1) Visibility is 10 km or more, (2) No Cumulonimbus cloud and no cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude whichever is greater, and (3) No significant present weather (see Table w'w')
			NCD no cloud detected (in AUTO reports only)
TEMP AND DEW POINT	TT/T$_d$T$_d$		Temperature in whole degrees Celsius (if below 0°C preceded by **M**)
			Dew-point temperature in whole degrees Celsius (if below 0°C preceded by **M**)
PRESSURE	Q P$_H$P$_H$P$_H$P$_H$		Indicator of **Q**NH in hectopascals. If Q = **A** then QNH is in inches
			QNH rounded down to the whole nearest hectopascal or to the tenths and hundredths of an inch depending on indicator
SUPPLEMENTARY INFORMATION — RECENT WEATHER	RE w'w'		Indicator of **RE**cent weather
			REcent weather since previous report (intensity NOT to be reported)
SUPPLEMENTARY INFORMATION — WIND SHEAR	WS RWY(D$_R$D$_R$		**Wind Shear**
			RUNWAY
			Runway designator — for parallel runways, may have **LL**, **L**, **C**, **R** or **RR** appended (**L** = left; **C** = centre; **R** = right)
			Replaced when all runways are affected by wind shear by: **WS ALL RWY**
SUPPLEMENTARY INFORMATION — STATE OF SEA/SURFACE TEMP	W T$_s$T$_s$ S S'		Group indicator letter
			Temperature in whole degrees Celsius
			S indicator of state of the sea
			S' state of the water surface (see code S')
SUPPLEMENTARY INFORMATION — STATE OF THE RUNWAY**	(R$_D$R$_D$E$_R$C$_R$C$_R$e$_R$e$_R$B$_R$B$_R$		Indicator of runway
			Runway deposits
			Extent of runway contamination
			Depth of deposit
CHANGE INDICATORS	TTTT or NOSIG		**BECMG** = **BECOMING** or **TEMPO** = **TEMPO**RARY } see over for definitions **NOSIG** = **NO SIG**NIFICANT CHANGE
CHANGE AND TIME	TTGGgg		Can be **AT** or **FM** = FROM or **TL** = TILL
			Associated time group in hours and minutes UTC
TREND FORECAST TWO HOURS FROM TIME OF OBSERVATION — FORECAST WIND	dddffGf$_m$f$_m$	KMH or KT or MPS	Wind speed units
			Forecast maximum wind speed (gust)
			Indicator of **G**ust
			Forecast mean wind speed
			Forecast mean wind direction in degrees true, rounded to nearest ten degrees (**VRB** = VARIABLE)
		00000 = calm	
FORECAST VISIBILITY	VVVV		Forecast surface visibility in metres 9999 = 10 km or more
FORECAST WEATHER	w'w'		Forecast significant weather (see Table)
			Replaced when significant weather ends by: **NSW** — Nil Significant Weather
FORECAST CLOUDS OF OPERATIONAL SIGNIFICANCE OR VERTICAL VISIBILITY	N$_s$N$_s$N$_s$h$_s$h$_s$h$_s$(cc)		Cloud type — only **CB**
			Forecast height of base of cloud
			Forecast cloud amount
			Replaced when sky expected to be obscured and vertical visibility forecasts are undertaken by: VVh$_s$h$_s$h$_s$ — Indicator of Vertical Visibility — Vertical visibility in units of 30 m (100 ft)
			Replaced when a change to clear sky forecast by: **SKC** — Sky Clear
			Replaced when no CB and no cloud below 1 500 m (5 000 ft) or highest minimum sector altitude whichever is greater, are forecast and **CAVOK** or **SKC** are not appropriate by: **NSC** — Nil Significant Cloud
RMK			Information included by national decision but not disseminated internationally

w'w' – SIGNIFICANT PRESENT, FORECAST AND RECENT WEATHER

QUALIFIER: INTENSITY OR PROXIMITY 1	QUALIFIER: DESCRIPTOR 2	WEATHER PHENOMENA: PRECIPITATION 3	WEATHER PHENOMENA: OBSCURATION 4	WEATHER PHENOMENA: OTHER 5
– Light	MI Shallow	DZ Drizzle	BR Mist	PO Dust/sand whirls (dust devils)
Moderate (no qualifier)	BC Patches	RA Rain	FG Fog	SQ Squalls
+ Heavy or well-developed in the case of **PO** and **FC**	PR Partial (covering part of the aerodrome)	SN Snow	FU Smoke	FC Funnel cloud(s) (tornado or waterspout)
		SG Snow grains	VA Volcanic ash	
		IC Ice crystals (diamond dust)	DU Widespread dust	
	DR Low drifting	PL Ice pellets	SA Sand	SS Sandstorm
	BL Blowing	GR Hail	HZ Haze	DS Duststorm
VC In the vicinity	SH Showers(s)	GS Small hail and/or snow pellets		
	TS Thunderstorm			
	FZ Freezing (supercooled)	UP Unidentified precipitation (in AUTO reports only)		

S' – STATE OF THE SEA

Code figure S'	Descriptive terms
0	Calm (glassy)
1	Calm (rippled)
2	Smooth (wavelets)
3	Slight
4	Moderate
5	Rough
6	Very rough
7	High
8	Very high
9	Phenomenal

NOTES: 1. The w'w' groups are constructed by considering columns 1 to 5 in the table above in sequence, that is intensity, followed by description, followed by weather phenomena.
An example could be: **+SHRA** (heavy shower(s) of rain).
2. A precipitation combination has dominant type first.
3. **DR** (low drifting) less than two metres above ground, **BL** (blowing) two metres or more above ground.
4. **GR** used when hailstone diameter 5 mm or more. When less than 5 mm, **GS** used.
5. **BR** – visibility at least 1 000 m but not more than 5 000 m; **FG** – visibility less than 1 000 m.
6. **VC** – within 8 km of the aerodrome perimeter, but not at the aerodrome.

* Clouds of operational significance (i.e. below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater, and CB or TCU)

** State of the runway to be provided by appropriate airport authority

Abbreviated decode of METAR and SPECI
For details of codes see
WMO *Manual on Codes*,
WMO Publication No. 306

July 2001 Revised February 2005 by DMI

AERODROME FORECAST — TAF DECODE

IDENTIFICATION GROUPS

TAF	**TAF** – Aerodrome Forecast code name **TAF – AMD** – Amended Aerodrome Forecast
CCCC	ICAO four-letter location indicator
YYGGgg**Z**	Date and time of origin of forecast in UTC
	Indicator of UTC
$Y_1Y_1G_1G_1G_2G_2$	Y_1Y_1 day of month, period of validity beginning G_1G_1 and ending G_2G_2 in hours UTC

FORECAST SURFACE WIND

dddff**G**f_mf_m **KMH** or **KT** or **MPS**	Wind speed units used
	Maximum wind speed (gust)
	Indicator of **G**ust
	Mean wind speed
	Mean wind direction in degrees true rounded to nearest ten degrees (**VRB** = **VARIABLE**)
	00000 = calm
	P199 KMH (P99 KT, P49 MPS) mean f_mf_m = 200 KMH (100 KT, 50 MPS) or more

FORECAST VISIBILITY

VVVV	**Prevailing visibility in metres** 9999 = 10 km or more
	Replaced when significant weather phenomenon forecast to end by: **NSW**
	Nil Significant Weather

FORECAST SIGNIFICANT WEATHER

w'w'	Forecast significant weather (see table w'w' for METAR/SPECI decode)

FORECAST CLOUD AMOUNT AND HEIGHT*

$N_sN_sN_sh_sh_sh_s(cc)$	Cloud type — only **CB** (Cumulonimbus) is indicated
	Height of base of cloud in units of 30 m (100 ft)
	Cloud amount: **FEW** – **FEW** (1–2 oktas) **SCT** – **SCa**T**tered** (3–4 oktas) **BKN** – **Bro**K**eN** (5–7 oktas) **OVC** – **OVer**C**ast** (8 oktas)
	Replaced when sky is expected to be obscured and information on vertical visibility is available by: $VVh_sh_sh_s$
	Vertical visibility in units of 30 m (100 ft)
	Indicator of **V**ertical **V**isibility
	Replaced when clear sky is forecast by: **SKC**
	SKy **C**lear
	Replaced when no CB and no cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater, are forecast and CAVOK and SKC are not appropriate by: **NSC**
	Nil Significant **C**loud

* Clouds of operational significance (i.e. below 1 500 m (5 000 ft) or below highest minimum sector altitude, whichever is greater, and CB or TCU)

CAVOK

Ceiling **A**nd **V**isibility **OK**. **Replaces** visibility, weather and cloud if:
1) Visibility is forecast to be 10 km or more
2) No Cumulonimbus cloud and no other cloud forecast below 1 500 m (5 000 ft) or below the highest minimum sector altitude whichever is greater, and
3) No significant weather forecast (see Table overleaf)

SIGNIFICANT CHANGES IN FORECAST CONDITIONS INDICATED BY:

PROBABILITY	TIME	GGG_eG_e	Beginning GG and end G_eG_e of forecast period in hours UTC
PROBC_2C_2			Only 30 or 40 used, indicating 30% or 40%
			PROBability
			Probability is used to indicate the probability of occurence of: a) an alternative element or elements b) temporary fluctuations
	TIME	GGG_eG_e	Beginning GG and end G_eG_e of forecast period in hours UTC
	CHANGE	TTTTT	Type of significant change: **BECMG** - **BECo**M**in**G, used where changes are expected to reach or pass through specified values at a regular or irregular rate **TEMPO** - **TEMPO**rary fluctuations of less than one hour and in aggregate less than half the period indicated by GGG_eG_e
	TIME	GGG_eG_e	Beginning GG and end G_eG_e of forecast period in hours UTC

OR
if one set of weather conditions is expected to change more or less completely to a different set of conditions, thus indicating the beginning of another self-contained part of the forecast, by: TTGGgg

This takes the form **FM**GGgg where **FM** is the abbreviation for "**FroM**" and GGgg is the time in hours and minutes UTC. All forecast conditions before this group are superseded by conditions indicated after the group.

BY REGIONAL AGREEMENT

FORECAST TEMPERATURE (**TX**T_FT_F /G_FG_F**Z** **TN**T_FT_F /G_FG_F**Z**)

Z Indicator of UTC

G_FG_F Time UTC to which forecast temperature refers

T_FT_F Forecast temperature at G_FG_F
Temperatures below 0°C preceded by **M**

TX, TN Indicators of maximum and minimum forecast temperatures respectively

July 2001 Revised February 2005 by DMI

Danmarks Meteorologiske Institut
Trafikministeriet

dmi.dk

Abbreviated decode of TAF
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