

# Weather card (March 2021)

UTC calculation table		
UTC	NZST	NZDT
0000	1200	1300
0100	1300	1400
0200	1400	1500
0300	1500	1600
0400	1600	1700
0500	1700	1800
0600	1800	1900
0700	1900	2000
0800	2000	2100
0900	2100	2200
1000	2200	2300
1100	2300	0000
1200	0000	0100
1300	0100	0200
1400	0200	0300
1500	0300	0400
1600	0400	0500
1700	0500	0600
1800	0600	0700
1900	0700	0800
2000	0800	0900
2100	0900	1000
2200	1000	1100
2300	1100	1200

GRAFOR		
Graphical Aviation Forecast chart provides forecast weather information for low-level flights (SFC to FL100). All times UTC.		
Issue times	1100 and 2100	
Valid times	1100 issue – 1800, 0000 and 0600 2100 issue – 0000, 0600 and 1200 Each chart is valid for +/- 3 hours of the stated valid time, e.g., a chart valid at 1800 is valid for use between 1500 and 2100	
No of charts	3 charts at each issue time	
Heights	Hundreds of feet AMSL	
Area	New Zealand with a 15NM envelope extending seaward from the coastline, and adjusted over the Southern Taranaki Bight. The 15NM envelope is marked on the charts	
Fronts	Cold, Warm, Occluded, Stationary	
Visibility	Metres (M) or Kilometres (KM)	
Phenomena	SH, TS, DZ, RA, GS, GR, SN, SG, BR, FG, HZ, FU, VA, DU, SA, SQ, PO, FC, SS, DS	
Deep convective cloud	Type	TCU, CB
	Coverage	ISOL, OCNL, FRQ, EMBD
Non deep convective cloud	Coverage	OVC, BKN, SCT, NSC
Freezing level	Spot values depicted in a box. 0° means 0° C and three figures indicate the height in hundreds of feet AMSL, e.g., 085 = 8,500 ft; 115 = 11,500 ft <span style="border: 1px solid black; padding: 2px;">0° : 085</span>	

AAW		
Aviation Area Winds. All times UTC.		
Issue times	1100 and 2100	
Validity	1200 to 0600 and 2100 to 1200. Each of these may be split into smaller periods within the overall validity	
Heights	Winds	1,000, 3,000, 5,000, 7,000 and 10,000 ft AMSL
	Temperatures	5,000, 7,000 and 10,000 ft AMSL
Wind	Speed	Knots
	Direction	Degrees true
Temperature	Degrees Celsius	
Areas	17 areas (the previous ARFOR areas)	

GNZSIGWX		
Graphical New Zealand Significant Weather chart provides forecast information on the horizontal and vertical extent of turbulence, mountain waves, cumulonimbus clouds (CB), icing for flights within the New Zealand FIR (NZCC), and awareness information for volcanic activity and radioactive cloud. All times UTC.		
Issue times	0200, 1400 and 2000	
Validity	0300 to 1800, 1500 to 0600 and 2100 to 1200	
No of charts	3	SFC to FL100, SFC to FL250 and SFC to FL410
Heights	Flight levels (FLs) unless otherwise specified	
Area	New Zealand FIR (NZCC)	
Phenomena	MOD ICE, MOD TURB, MTW, VA, RDOACT, Volcanic Alert Level when ≥ 2	
Cloud	Type	Cumulonimbus (CB), which also implies SEV ICE and SEV TURB
	Coverage	ISOL, OCNL, FRQ, EMBD

SIGMET (Textual)*		
SIGMETs provide information on observed or forecast hazardous weather conditions.		
Issue times	As required. May be issued up to four hours in advance (or up to twelve hours for volcanic ash and tropical cyclones)	
Validity	Four hours (six hours for volcanic ash and tropical cyclones), reviewed near end of validity period or when further information is available	
Heights	Feet above mean sea level up to 10,000 feet, flight levels from FL100	
Area	New Zealand FIR (NZCC) and Auckland Oceanic FIR (NZCO)	

\* A graphical depiction of SIGMETs (GSM – Graphical SIGMET Monitor) is also available.

TAF and TREND		
A TAF is an aerodrome forecast provided for a specific aerodrome presented in code. A TREND is a forecast, valid for two hours, attached to the end of a METAR or SPECI (NZWP, NZOH only) and METAR AUTO (NZAA, NZWN, NZCH only), stating any significant changes from those described. While the TREND is valid it supersedes the aerodrome TAF.		
Issue times	NZAA, NZWN, NZCH and NZHN: 0515, 1115, 1715 and 2315 UTC NZWP: 1725, 2330 UTC. NZQN: 1130, 1730 UTC Issue times are one hour earlier during NZDT except for NZAA, NZHN, NZWN, NZCH, NZQN All other aerodromes: 1115, 2315 UTC (but one hour earlier during NZDT)	
Validity	1921/2012 = valid from 2100 UTC on the 19th to 1200 UTC on the 20th	
Heights	Feet above aerodrome level	
Area	Within 8KM of the aerodrome reference point, but within 16KM for cloud	
Wind	Speed	Knots
	Direction	Degrees true
Visibility	Up to 9999 metres – in metres, e.g. 7000 Above 9999 metres – in kilometres, e.g. 20KM CAVOK and 9999 used at Auckland, Wellington and Christchurch only	
Cloud	Type	CB, TCU
	Amount	NSC, SKC, FEW, SCT, BKN, OVC

METAR, METAR AUTO and SPECI		
A METAR is a routine meteorological report, compiled manually, provided for a specific aerodrome, and presented in code. A METAR AUTO is a routine meteorological report provided by an automatic weather station (AWS) for a specific aerodrome, also presented in code. A SPECI is a METAR issued outside of the routine issue time of a METAR (NZWP, NZOH and NZMF only).		
Issue times	METARs issued hourly, on the hour METAR AUTOs issued every half hour, 24 hours a day SPECIs issued when required and will have issue time other than on the hour SPECIs not issued at METAR AUTO aerodrome	
Heights	Feet above aerodrome level	
Area	Within 8KM of the aerodrome reference point When the term VC is used this applies to the area between 8 and 16KM from the aerodrome reference point	
	Speed	Knots
Wind	Direction	Degrees true. When direction varies by 60 degrees or more, the extreme directions are given, separated by the letter V, e.g. 260V330
	Up to 9999 metres – in metres, e.g. 7000 Above 9999 metres – in kilometres, e.g. 20KM Visibility variation shown by adding the direction, e.g. 2000SW – visibility variation not reported in METAR AUTO CAVOK and 9999 (10KM or more) used at Auckland, Wellington and Christchurch only	
Cloud	Type	CB, TCU (not provided in METAR-AUTO, except for NZAA, NZWN and NZCH)
	Amount	NSC, SKC, FEW, SCT, BKN, OVC
Temperature/dew point	Degrees Celsius	
Pressure (QNH)	Hectopascals (hPa)	

ATIS		
The ATIS is a continuous plain language broadcast of the current conditions at an aerodrome, on a discrete frequency.		
Issue times	Irregularly, when conditions change or deteriorate	
Heights	Feet above aerodrome level	
Wind	Speed	Knots
	Direction	Degrees magnetic
Visibility	Less than 5000 metres – in metres, e.g. 3000 5000 metres or more – in kilometres, e.g. 5KM	
Cloud	Type	CB, TCU
	Amount	SKC, FEW, SCT, BKN, OVC
Temperature/dew point	Degrees Celsius	
Pressure (QNH for ATIS only)	Hectopascals (hPa)	

When Cumulonimbus cloud (CB) is included in meteorological information this implies that there may be associated thunderstorms and the occurrence of severe icing, turbulence and hail.

# MET abbreviations

// <sup>1</sup>	Weather not detected due sensor temporarily inoperative	BC	Patches	FG	Fog (visibility less than 1000 m)	MAX	Maximum	QNH	Altimeter sub-scale setting	TL	Till
/// <sup>1</sup>	Cloud is detected (unable to determine TCU/CB)	BDRY	Boundary	FIR	Flight information region	METAR	Aerodrome routine meteorological report	R	Runway	TREND	Trend forecast
//// <sup>1</sup>	Visibility not reported due faulty sensor	BECMG	Becoming	FISB	Flight information service broadcast	METAR AUTO	Automatic aerodrome routine meteorological report	RA	Rain	TS	Thunderstorm
/////	Cloud not reported due faulty sensor	BFR	Before	FL	Flight level	MI	Shallow	RDOACT	Radioactive	TURB	Turbulence
////// <sup>1</sup>	Cloud not reported due faulty sensor	BKN	Broken (5–7 oktas)	FM	From	MOD	Moderate	RDOACT CLD	Radioactive cloud	UP	Unidentified precipitation
-	Light	BL	Blowing	FRQ	Frequent	MOV	Moving	RE	Recent	UTC	Coordinated Universal Time
(blank space)	Moderate (when included before a weather phenomenon)	BLDG	Building	FU	Smoke	MS	Minus	RMK	Remark	V	Variations from mean wind direction
+	Heavy	BLW	Below	FZ	Freezing	MT	Mountain	ROFOR	Route forecast	VA	Volcanic ash
9999	Visibility 10KM or more	BR	Mist (1000–5000 M vis)	FZL	Freezing level	MTW	Mountain waves	RVR	Runway visual range	VAA	Volcanic Ash Advisory
AAW	Aviation Area Winds	BTN	Between	G	Gusts	NC	No change	SA	Sand	VAAC	Volcanic Ash Advisory Centre
ABT	About	BWR	Basic weather report	GNZSIGWX	Graphical NZ significant weather	NCD <sup>1</sup>	No cloud detected below 10,000 ft	SC	Stratocumulus	VAG	Volcanic Ash Graphic
ABV	Above	CAT	Clear air turbulence	GR	Hail (5 mm or more)	NM	Nautical miles	SCT	Scattered (3–4 oktas)	VAL	In valleys
AC	Alto cumulus	CAVOK <sup>2</sup>	Cloud and visibility OK	GRAFOR	Graphical aviation forecast	NOSIG	No significant change	SECT	Sector	VC	Vicinity of the aerodrome
AD QNH	Aerodrome QNH forecast	CB	Cumulonimbus	GS	Small hail (smaller than 5 mm)	NOTAM	Notice to airmen	SEV	Severe	VCY	Vicinity
AFT	After	CLD	Cloud	GSM	Graphical SIGMET Monitor	NS	Nimbostratus	SFC	Surface	VFR	Visual flight rules
AGL	Above ground level	CLR	Clear	HVY	Heavy	NSC <sup>2</sup>	No significant cloud	SG	Snow grains	VIS	Visibility
AIP	Aeronautical Information Publication	CNL	Cancel	HZ	Haze (visibility less than 5000 m)	NSW	Nil significant weather	SH	Shower	VMC	Visual meteorological conditions
AIREP	Routine air report from aircraft in flight	CONS	Continuous	ICA	International Civil Aviation Organization	NXT	Next	SIG	Significant	VRB	Variable
AIREP SPECIAL	Special (non-routine) air report from aircraft in flight	COR	Corrected	ICAO	International Civil Aviation Organization	NZZC	New Zealand FIR	SIGMET	Significant meteorological information	VV	Vertical visibility
AMD	Amended	COT	At the coast	ICE	Icing	NZZO	Auckland Oceanic FIR	SIGWX	Significant weather forecast	WI	Within
AMSL	Above mean sea level	CU	Cumulus	IFR	Instrument flight rules	OBS	Observed	SKC <sup>3</sup>	Sky clear (no cloud at all)	WKN	Weakening
APRX	Approximate	DP	Dew point temperature	IMC	Instrument meteorological conditions	OBSC	Obscured	SN	Snow	WDSR	Widespread
AS	Altostratus	DR	Low drifting	IMPR	Improving	OCNL	Occasional	SPECI	Aerodrome special meteorological report	WS	Windshear
AT	At	DS	Dust storm	INTSF	Intensifying	OPMET	Operational meteorological information	SQ	Squall	WX	Weather
ATIS	Automatic terminal information service	DTG	Date time group	ISOL	Isolated	OVC	Overcast (8 oktas)	SQL	Squall line	Z	Coordinated Universal Time
ATS	Air traffic services	DTRT	Deteriorating/deteriorate	KM	Kilometres	PIREP	Pilot report (AIREP)	SS	Sandstorm		
AWIB	Aerodrome and weather information broadcast	DU	Dust	KT	Knots	PL	Ice pellets	ST	Stratus		
AWS	Automatic weather station (produces METAR AUTO)	DZ	Drizzle	LAN	Inland	PO	Dust/sand whirls	STNR	Stationary		
BASE	Cloud base	EMBD	Embedded	LCA	Local/locally/location/located	PR	Partial	T	Temperature, in degrees Celsius		
		EST	Estimated	LYR	Layer	PROB	Probability	TAF	Aerodrome forecast		
		EXC	Except	M	Metres	PS	Plus	TC	Tropical cyclone		
		EXTD	Extended or extending			PSN	Position	TCU	Towering cumulus		
		FC	Funnel cloud			Q	QNH	TEMPO	Temporarily		
		FCST	Forecast								
		FEW	Few (1–2 oktas)								

1 used in METAR AUTO only  
 2 only used in TREND/TAF for NZAA, NZWN, NZCH  
 3 not used in METAR AUTO or TAF/TREND for NZAA, NZWN, NZCH