



AERODROME METEOROLOGICAL OBSERVING SYSTEMS STUDY GROUP (AMOSSG)

FIFTH MEETING

Montreal, 11 to 14 April 2005

Agenda Item 5: Aerodrome observation requirements 5.1: Reporting requirements and criteria

TREND FORECAST IN LOCAL ROUTINE AND SPECIAL REPORTS

(Presented by C.M. Cheng)

SUMMARY

This paper reviews the templates for local routine and special reports, and highlights some issues in representing trend forecast of visibility and wind in local routine and special reports.

1. INTRODUCTION

1.1 Annex 3, in its Amendment 73, introduces a template for the local routine and special reports at Table A3-1 (see Appendix A) which specify, among others, the format for a trend forecast.

2. TREND FORECAST FOR VISIBILITY AND SURFACE WIND

2.1 Appendix 5, para. 2.2.3 requires that “In trend forecasts appended to local routine and special reports; visibility refers to the forecast visibility along the runway(s)”. In the template for local routine and special reports in Table A3-1 (see appendix), there is no reference to runway or runway section in the trend forecast of “along runway” visibility (which in principle could be different for different runways), whereas the report of visibility (see appendix) contains reference to runway and runway section.

2.2 Difficulties arise when there are different readings of visibility for different sections of a particular runway while there is only one value of trend forecast of “along runway” visibility. The same difficulties also exist for surface wind report and wind trend forecast in Table A3-1 in Annex 3. There is uncertainty as to how the criteria for trend forecast (Annex 3, Appendix 5, para. 2.2.2 and 2.2.3) should be applied and how to reconcile reference to runway locations in the trend forecast. There is therefore a need

to clarify in Annex 3 and/or relevant ICAO guidance material how to present and interpret the trend forecast of “along runway” visibility and wind in local routine and special reports. Consideration could be made in incorporating an optional field for “Runway” to the template for the trend forecast of visibility and wind.

2.3 While this issue could be a subject for local agreement between the MET authority, ATS authority and other relevant users of the local routine and special reports, it is highly desirable that this issue be clarified in Annex 3 and/or relevant ICAO guidance material.

3. ACTION BY THE GROUP

3.1 The group is requested to:

- a) note the issues raised in this paper; and
 - b) consider to clarify in Annex 3 and/or relevant ICAO guidance material how to present the trend forecast of “along runway” visibility and wind in relation to the different reported visibility and winds for different runways and different sections of the runways in the local routine and special reports.
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APPENDIX

TABLE A3-1 IN ANNEX 3

Table A3-1. Template for the local routine (MET REPORT) and local special (SPECIAL) reports

Key: M = inclusion mandatory, part of every message
C = inclusion conditional, dependent on meteorological conditions
O = inclusion optional

Note 1.— The ranges and resolutions for the numerical elements included in the local routine and special reports are shown in Table A3-4 of this appendix.

Note 2.— The explanations for the abbreviations used can be found in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes (PANS-ABC, Doc 8400).

Element as specified in Chapter 4	Detailed content	Template(s)		Examples
Identification of the type of report (M)	Type of report	MET REPORT or SPECIAL		MET REPORT SPECIAL
Location indicator (M)	ICAO location indicator (M)	nnnn		YUDO ¹
Time of the observation (M)	Day and actual time of the observation in UTC	nnnnnZ		221630Z
Surface wind (M)	Name of the element (M)	WIND		WIND 240/15KMH (WIND 240/8KT)
	Runway (O) ²	RWY nn[n]		WIND RWY 18 TDZ 190/22KMH (WIND RWY 18 TDZ 190/11KT)
	Runway section (O) ³	TDZ		
	Wind direction (M)	nnn/ or VRB	VRB BTN nnn/ AND nnn/ or VRB	CALM WIND VRB4KMH WIND CALM (WIND VRB2KT) WIND VRB BTN 350/ AND 050/4KMH (WIND VRB BTN 350/ AND 050/2KT)
	Wind speed (M)	[ABV] n[n][n]KMH (or [ABV] n[n]KT)		WIND 270/ABV 199KMH (WIND 270/ABV 99KT)
	Significant speed variations (C) ⁴	MAX [ABV] nn [n] MNM n [n]		WIND 120/12KMH MAX35 MNM8 (WIND 120/6KT MAX18 MNM4)
	Significant directional variations (C) ⁵	VRB BTN nnn/ AND nnn/	—	WIND 020/20KMH VRB BTN 350/ AND 070/ (WIND 020/10KT VRB BTN 350/ AND 070/)
	Runway section (O) ³	MID		WIND RWY 14R MID 140/22KMH (WIND RWY 14R MID 140/11KT)
	Wind direction (O) ³	nnn/ or VRB	VRB BTN nnn/ AND nnn/ or VRB	CALM
	Wind speed (O) ³	[ABV] n[n][n]KMH (or [ABV] n[n]KT)		
	Significant speed variations (C) ⁴	MAX [ABV] nn [n] MNM n [n]		
Significant directional variations (C) ⁵	VRB BTN nnn/ AND nnn/	—		

	Runway section (O) ³	END		WIND RWY 27 TDZ 240/32KMH MAX54 MNM20 END 250/28KMH (WIND RWY 27 TDZ 240/16KT MAX27 MNM10 END 250/14KT)
	Wind direction (O) ³	nnn/	VRB BTN nnn/ AND nnn/ or VRB	CALM
	Wind speed (O) ³	[ABV] n[n][n]KMH (or [ABV] n[n]KT)		
	Significant speed variations (C) ⁴	MAX [ABV] nn [n] MNM n [n]		
	Significant directional variations (C) ⁵	VRB BTN nnn/ AND nnn/	—	
Visibility (M)	Name of the element (M)	VIS		CAVOK VIS 350M CAVOK VIS 7KM VIS 10KM VIS RWY 09 TDZ 800M END 1200M
	Runway (O) ²	RWY nn[n]		
	Runway section (O) ³	TDZ		
	Visibility (M)	nn[n][n]M or n[n]KM		
	Runway section (O) ³	MID		
	Visibility (O) ³	nn[n][n]M or n[n]KM		
	Runway section (O) ³	END		VIS RWY 18 TDZ 6KM RWY 27 TDZ 4000M
RVR (C) ⁶	Name of the element (M)	RVR		RVR RWY 32 400M RVR RWY 20 500M
	Runway (C) ⁷	RWY nn[n]		
	Runway section (C) ⁸	TDZ		
	RVR (M)	[ABV or BLW] nn[n][n]M		RVR RWY 10 BLW 50M RVR RWY 14 ABV 2000M RVR RWY 10 BLW 150M RVR RWY 12 ABV 1200M
	Runway section (C) ⁸	MID		RVR RWY 12 TDZ 1100M MID ABV 1400M
	RVR (C) ⁸	[ABV or BLW] nn[n][n]M		
	Runway section (C) ⁸	END		RVR RWY 16 TDZ 600M MID 500M END 400M RVR RWY 26 500M RWY 20 800M
Present weather (C) ^{9, 10}	Intensity of present weather (C) ⁹	FBL or MOD or HVY	—	

	Characteristics and type of present weather (C) ^{9,11}	DZ or RA or SN or SG or PL or DS or SS or FZDZ or FZRA or SHGR or SHGS or SHPL or SHRA or SHSN or TSGR or TSGS or TSPL or TSRA or TSSN	IC or FG or BR or SA or DU or HZ or FU or VA or SQ or PO or FC or TS or BCFG or BLDU or BLSA or BLSN or DRDU or DRSA or DRSN or FZFG or MIFG or PRFG	MOD RA HZ HVY TSRA HVY DZ FBL SN HVY TSRASN FBL SNRA FBL DZ FG HVY SHSN BLSN	FG VA MIFG
Cloud (M) ¹²	Name of the element (M)	CLD			CLD SCT 300M OVC 600M CLD NSC (CLD SCT 1000FT OVC 2000FT) CLD OBSC VER VIS 150M CLD SKC (CLD OBSC VER VIS 500FT) CLD BKN TCU 270M (CLD BKN TCU 900FT) CLD RWY 08 BKN 60M RWY 26 BKN 90M (CLD RWY 08 BKN 200FT RWY 26 BKN 300FT)
	Runway (O) ²	RWY nn[n]			
	Cloud amount (M) or vertical visibility (O) ⁹	FEW or SCT or BKN or OVC	OBSC	SKC or NSC	
	Cloud type (C) ⁹	CB or TCU	—		
	Height of cloud base or the value of vertical visibility (C) ⁹	nn[n][n]M (or nnn[n]FT)	[VER VIS nn[n]M (or VER VIS nnn[n]FT)]		
Air temperature (M)	Name of the element (M)	T			T17 TMS08
	Air temperature (M)	[MS]nn			
Dew-point temperature (M)	Name of the element (M)	DP			DP15 DPMS18
	Dew-point temperature (M)	[MS]nn			
Pressure values (M)	Name of the element (M)	QNH			QNH 0995HPA QNH 1009HPA
	QNH (M)	nnnnHPA			
	Name of the element (O)	QFE			QNH 1022HPA QFE 1001HPA QNH 0987HPA QFE RWY 18 0956HPA RWY 24 0955HPA
	QFE (O)	[RWY nn[n]] nnnnHPA [RWY nn[n] nnnnHPA]			
Supplementary information (C) ⁹	Significant meteorological phenomena (C) ⁹	CB or TS or MOD TURB or SEV TURB or WS or GR or SEV SQL or MOD ICE or SEV ICE or FZDZ or FZRA or SEV MTW or SS or DS or BLSN or FC ¹³			FC IN APCH WS IN APCH 60M-WIND: 360/50KMH WS RWY 12
	Location of the phenomenon (C) ⁹	IN APCH [nnnMWIND nnn/nnKMH] or IN CLIMB-OUT [nnnM-WIND nnn/nnKMH] (IN APCH [nnnFT-WIND nnn/nnKT] or IN CLIMBOUT [nnnFTWIND nnn/nnKT]) or RWY nn[n]			
	Recent weather (C) ^{9, 10}	REFZDZ or REFZRA or REDZ or RE[SH]RA or RE[SH]SN or RESG or RE[SH]PL or RESHGR or RESHGS or REBLSN or RESS or REDS or RETSRA or RETSSN or RETSPL or RETSGR or RETSGS or REFC or REVA			REFZRA CB IN CLIMB-OUT RETSRA

Trend forecast (O) ¹⁴	Name of the element (M)	TREND				
	Change indicator (M) ¹⁵	NOSIG	BECMG or TEMPO		TREND NOSIG TREND BECMG FEW 600M (TREND BECMG FEW 2000FT)	
	Period of change (C) ⁹		FMnnnn and/or TLnnnn or ATnnnn			
	Wind (C) ⁹		nnn/ [ABV] n[n][n]KMH [MAX[ABV]nn[n]] (or nnn/ [ABV] n[n]KT [MAX[ABV]nn])		TREND TEMPO 250/70KMH MAX 100 (TREND TEMPO 250/35KT MAX 50)	
	Visibility (C) ⁹		VIS nn[n][n]M or VIS n[n]KM	CAVOK	TREND BECMG AT1800 VIS 10KM NSW TREND BECMG TL1700 VIS 800M FG TREND BECMG FM1030 TL1130 CAVOK	
	Weather phenomenon: intensity (C) ⁹		FBL or MOD or HVY	—	NSW	TREND TEMPO TL1200 VIS 600M BECMG AT1230 VIS 8KM NSW NSC
	Weather phenomenon: characteristics and type (C) ^{9, 10, 12}		DZ or RA or SN or SG or PL or DS or SS or FZDZ or FZRA or SHGR or SHGS or SHPL or SHRA or SHSN or TSGR or TSGS or TSPL or TSRA or TSSN	IC or FG or BR or SA or DU or HZ or FU or VA or SQ or PO or FC or TS or BCFG or BLDU or BLSA or BLSN or DRDU or DRSA or DRSN or FZFG or MIFG or PRFG		TREND TEMPO FM0300 TL0430 MOD FZRA TREND BECMG FM1900 VIS 500M HVY SNRA TREND BECMG FM1100 MOD SN TEMPO FM1130 BLSN
	Name of the element (C) ⁹		CLD			
	Cloud amount and vertical visibility (C) ⁹		FEW or SCT or BKN or OVC	OBSC	SKC or NSC	TREND BECMG AT1130 CLD OVC 300M (TREND BECMG AT1130 CLD OVC 1000FT)
	Cloud type (C) ⁹		CB or TCU	—		TREND TEMPO TL1530 HVY SHRA CLD BKN CB 360M (TREND TEMPO TL1530 HVY SHRA CLD BKN CB 1200FT)
Height of cloud base or the value of vertical visibility (C) ⁹		nn[n][n]M (or nnn[n]FT)	VER VIS nn[n]M (or VER VIS nnn[n]FT)			

Notes.—

1. Fictitious location.
2. Optional values for one or more runways.
3. Optional values for one or more sections of the runway.
4. To be included in accordance with 4.1.4.2 c).
5. To be included in accordance with 4.1.4.2 b) 1)
6. To be included if visibility or RVR < 1 500 m.
7. To be included in accordance with 4.3.6.4 d).
8. To be included in accordance with 4.3.6.4 c).
9. To be included whenever applicable.
10. One or more, up to a maximum of three groups in accordance with 4.4.2.6, 4.8.1.1 and Appendix 5, 2.2.4.1.

11. Precipitation types listed under 4.4.2.3 a) may be combined in accordance with 4.4.2.6 and Appendix 5, 2.2.4.1. Only moderate or heavy precipitation to be indicated in trend forecasts in accordance with Appendix 5, 2.2.4.1.
12. Up to four cloud layers in accordance with 4.5.4.1 g).
13. Abbreviated plain language may be used in accordance with 4.8.1.2.
14. To be included in accordance with Chapter 6, 6.3.2.
15. Number of change indicators to be kept to a minimum in accordance with Appendix 5, 2.2.1, normally not exceeding three groups.

— END —