

MONITORING OF SURFACE DATA

MONTHLY SUSPECT LIST

MONITORING CENTRE: MELBOURNE

MONITORING PROCEDURES :-

PERIOD : ONE CALENDAR MONTH

DATA MONITORED : REPORTS FROM EACH UNIQUE IDENTIFIER
FOR SYNOP

AREA : FULL GLOBAL

STANDARD OF COMPARISON : +6H FIRST GUESS FIELD FROM THE AUSTRALIAN GLOBAL
ASSIMILATION PREDICTION (GASP) MODEL

OBSERVATION TIMES : 00, 06, 12, 18 UTC

ELEMENT MONITORED : MSLP - MEAN SEA LEVEL PRESSURE (hPa)

PARAMETERS MONITORED :-

NOBS : NUMBER OF OBSERVATIONS RECEIVED (WITH FIRST
GUESS AVAILABLE) EXCLUDING DUPLICATES

NGE : NUMBER OF OBSERVATIONS WITH GROSS ERRORS

PGE : PERCENTAGE OF OBSERVATIONS WITH GROSS ERRORS

SD : STANDARD DEVIATION OF DIFFERENCE BETWEEN
OBSERVATIONS AND BACKGROUND FIELD
EXCLUDING OBSERVATIONS WITH GROSS ERRORS

BIAS : MEAN OF DIFFERENCE BETWEEN
OBSERVATIONS AND BACKGROUND FIELD
EXCLUDING OBSERVATIONS WITH GROSS ERRORS

RMS : ROOT MEAN SQUARE OF DIFFERENCE BETWEEN
OBSERVATIONS AND BACKGROUND FIELD
EXCLUDING OBSERVATIONS WITH GROSS ERRORS

GROSS ERROR LIMIT : 15.0 hPa

SELECTION CRITERIA : NOBS >= 20 AND ONE OR MORE OF THE FOLLOWING:
1. |BIAS| >= 4.0hPa
2. SD >= 6.0hPa
3. PGE >= 25%

TABLE 2

MONITORING OF RADIOSONDE OBSERVATIONS

MONTHLY SUSPECT LIST

MONITORING CENTRE: MELBOURNE

MONITORING PROCEDURES :-

PERIOD : ONE CALENDAR MONTH

DATA MONITORED : REPORTS FROM EACH UNIQUE IDENTIFIER
FOR RADIOSONDE TEMPS

AREA : FULL GLOBAL

STANDARD OF COMPARISON : +6HR FIRST GUESS FIELD FROM THE AUSTRALIAN GLOBAL
ASSIMILATION PREDICTION (GASP) MODEL

OBSERVATION TIMES : 00, 12 UTC

ELEMENTS MONITORED : GEOP - GEOPOTENTIAL HEIGHT (metres)

LEVELS MONITORED : LEV - STANDARD LEVELS FROM 1000 - 30 hPa
ONLY WORST LEVEL SHOWN WITH UNWEIGHTED RMS

PARAMETERS MONITORED :-

NOBS : NUMBER OF OBSERVATIONS RECEIVED (WITH FIRST
GUESS AVAILABLE) INCLUDING GROSS ERRORS

NGE : NUMBER OF OBSERVATIONS WITH GROSS ERRORS

SD : STANDARD DEVIATION OF DIFFERENCE BETWEEN
OBSERVATIONS AND BACKGROUND FIELD
EXCLUDING OBSERVATIONS WITH GROSS ERRORS

BIAS : MEAN OF DIFFERENCE BETWEEN
OBSERVATIONS AND BACKGROUND FIELD
EXCLUDING OBSERVATIONS WITH GROSS ERRORS

RMS : ROOT MEAN SQUARE OF DIFFERENCE BETWEEN
OBSERVATIONS AND BACKGROUND FIELD
EXCLUDING OBSERVATIONS WITH GROSS ERRORS

SUSPECT : NUMBER OF LEVELS SATISFYING SELECTION CRITERIA

GROSS ERROR LIMITS : DEFINED IN APPENDIX

SELECTION CRITERIA : AT LEAST 3 LEVELS WITH AT LEAST 10 REPORTS
HAVING WEIGHTED RMS OF AT LEAST 100M AT EACH

**GROSS ERROR LIMITS and RMS WEIGHTING VALUES
AS APPLIED TO RADIOSONDE OBSERVATIONS**

The gross error limits for observation minus first guess geopotential height (interpolated to location of observation), plus RMS weighting values, as applied for geopotential (upper air) results are:

Level (hPa)	Geopotential Difference (m)	Weight
1000	100	3.70
925	100	3.55
850	100	3.40
700	100	2.90
500	150	2.20
400	175	1.90
300	200	1.60
250	225	1.50
200	250	1.37
150	275	1.19
100	300	1.00
70	375	0.87
50	400	0.80
30	450	0.64

**MONITORING OF MARINE SURFACE OBSERVATIONS
SUSPECT LIST: SHIPS, FIXED BUOYS & PLATFORMS**

MONITORING CENTRE: MELBOURNE

MONITORING PROCEDURES :-

PERIOD : ONE CALENDAR MONTH

DATA MONITORED : REPORTS FROM EACH UNIQUE IDENTIFIER FOR SHIP

STANDARD OF COMPARISON : +6H FIRST GUESS FIELD FROM THE AUSTRALIAN GLOBAL ASSIMILATION PREDICTION (GASP) MODEL

OBSERVATION TIMES : 00, 06, 12, 18 UTC

POSITION LAT/LON : latitude & longitude for the initial report in the period

ELEMENTS MONITORED :

DD : Wind direction (degrees) except light winds (≤ 5 m/s)

FF : Wind speed (m/s)

MSLP : Mean sea level pressure (hPa)

SST : Sea surface temperature (C)

PARAMETERS MONITORED :-

NOBS : NUMBER OF OBSERVATIONS RECEIVED (WITH FIRST GUESS AVAILABLE) EXCLUDING DUPLICATES

NGE : NUMBER OF OBSERVATIONS WITH GROSS ERRORS

PGE : PERCENTAGE OF OBSERVATIONS WITH GROSS ERRORS

SD : STANDARD DEVIATION OF DIFFERENCE BETWEEN OBSERVATIONS AND BACKGROUND FIELD EXCLUDING OBSERVATIONS WITH GROSS ERRORS

BIAS : MEAN OF DIFFERENCE BETWEEN OBSERVATIONS AND BACKGROUND FIELD EXCLUDING OBSERVATIONS WITH GROSS ERRORS

RMS : ROOT MEAN SQUARE OF DIFFERENCE BETWEEN OBSERVATIONS AND BACKGROUND FIELD EXCLUDING OBSERVATIONS WITH GROSS ERRORS

GROSS ERROR LIMIT : 15.0 hPa (Pressure)
: 25.0 m/s (vector wind)
: 10.0 C (sea surface temperature)

SELECTION CRITERIA : NOBS \geq 20 AND ONE OR MORE OF THE FOLLOWING:

	wind direction(>5 m/s)	wind speed	pressure	sea surface temperature
1. BIAS \geq	30 degrees	5 m/s	4 hPa	3 C
2. SD \geq	80 degrees	-	6 hPa	5 C
3. %GROSS \geq	25 %	25 %	25 %	25 %

FOR DD: IF SD=999, CANNOT COMPUTE AVE WIND DIRECTION. THUS SD IS INDETERMINATE

FROM JANUARY 2005, SHIP & BUOY STATISTICAL REPORTS ON WIND DIRECTION ONLY REQUIRE OBSERVED VALUES > 5.0 m/s

**MONITORING OF MARINE SURFACE OBSERVATIONS
MONTHLY SUSPECT LIST: DRIFTING BUOYS**

MONITORING CENTRE: MELBOURNE

MONITORING PROCEDURES :-

PERIOD : ONE CALENDAR MONTH

DATA MONITORED : REPORTS FROM EACH UNIQUE IDENTIFIER FOR BUOY

STANDARD OF COMPARISON : +6H FIRST GUESS FIELD FROM THE AUSTRALIAN GLOBAL ASSIMILATION PREDICTION (GASP) MODEL

OBSERVATION TIMES : 00, 06, 12, 18 UTC

POSITION LAT/LON : latitude & longitude for the initial report in the period

ELEMENTS MONITORED :

DD : Wind direction (degrees) except light winds (<= 5m/s)

FF : Wind speed (m/s)

MSLP : Mean sea level pressure (hPa)

SST : Sea surface temperature (C)

PARAMETERS MONITORED :-

NOBS : NUMBER OF OBSERVATIONS RECEIVED (WITH FIRST GUESS AVAILABLE) EXCLUDING DUPLICATES

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BIAS : MEAN OF DIFFERENCE BETWEEN OBSERVATIONS AND BACKGROUND FIELD EXCLUDING OBSERVATIONS WITH GROSS ERRORS

RMS : ROOT MEAN SQUARE OF DIFFERENCE BETWEEN OBSERVATIONS AND BACKGROUND FIELD EXCLUDING OBSERVATIONS WITH GROSS ERRORS

GROSS ERROR LIMIT : 15.0 hPa (Pressure)
: 25.0 m/s (vector wind)
: 10.0 C (sea surface temperature)

SELECTION CRITERIA : NOBS >= 20 AND ONE OR MORE OF THE FOLLOWING:

	wind direction(>5m/s)	wind speed	pressure	sea surface temperature
1. BIAS >=	30 degrees	5 m/s	4 hPa	3 C
2. SD >=	80 degrees	-	6 hPa	5 C
3. %GROSS >=	25 %	25 %	25 %	25 %

FOR DD: IF SD=999, CANNOT COMPUTE AVE WIND DIRECTION. THUS SD IS INDETERMINATE

FROM JANUARY 2005, SHIP & BUOY STATISTICAL REPORTS ON WIND DIRECTION ONLY REQUIRE OBSERVED VALUES > 5.0 m/s