U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
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OFFICE NOTE 117

REVISED

NMC Format for SA Hourly Reports

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NMC FORMAT FOR SA HOURLY REPORTS

NMC receives bulletins of SA observations on the IBM 4341 computer system. These bulletins are broken into individual reports and passed on to the NAS 9000 computer system where they are transformed into the NMC format and stored into one of 24 hourly data sets - one for each hour of the day. The data set names are:

NMC.PROD.RAWDTA.HRLYxx where xx has values 00, 01,...23.

Observations are regularly placed in these data sets at 20 and 40 minutes after the hour. (e.g., at 1220Z and again at 1240Z) Since there are some 1200Z reports which are not available until the 1300Z collectives are received, the 1200Z data set is reloaded at 1320Z and again at 1340Z. For the hours evenly divisible by 3, a backup report is made available if the current report is missing. For example, a 1055Z report is stored if the 1155Z report is not available for the 1200Z data set.

All information is stored in EBCDIC.

The first logical record of each data set contains the following information:

HRLY-DTA-xx-mmdd-yy-gggg (followed by 192 blanks)

where,

xx	hour of reports GMT
mm	month of reports
dd	day of reports
yy	year of reports
gggg	dump time in hours and minutes GMT

The last logical record contains the following information:

END OF HRLY-DTA-xx (followed by 198 blanks)

The format of each 216-byte logical record is identical to that created on the IBM 4341 computer system for use on that system.

Attachment I shows some sample reports for 12Z January 3, 1986.

The 216-byte logical record for each reporting station is formatted as follows:

Byte Number	Contents
1- 5	Station call sign, left adjusted, blank fill.
6- 32	Station name, left adjusted, blank fill.
33- 37	Block-station number (if assigned), otherwise '99999'.
38	C means max/min temperatures are in degrees C. Blank means max/min temperatures in degrees F.
39	Blank.
40- 43	Elevation in meters. Right adjusted, zero fill. If below sea level, first character is -.
44- 45	Blanks.
46	Latitude indicator (N or S).
47- 48	Degrees of latitude.
49	Period.
50- 51	Minutes of latitude.
52	Blank.
53	Longitude indicator (E or W).
54- 56	Degrees of longitude.
57	Period.
58- 59	Minutes of longitude.
60	Blank.
61- 64	Observation time of report in hours and minutes GMT (GGgg).
65	Blank
66	Sign of temperature. (Blank = positive; - = negative; 1 if temperature is over 99°).
67- 68	Temperature (TT) in degrees °F.
69	Blank.
70	Sign of dew point temperature. (Blank = positive; - = negative; 1 if dew point is over 99°).
71- 72	Dew point temperature (T_dT_d) in °F.
73	Blank
74- 77	Visibility in miles. (Three digits and decimal point, e.g., 120., 12.0, 1.20, 0.12, 0.00).
78	Blank.
79- 86	Present weather.
87- 88	Partial obscuration, if observed, when there are cloud layers, e.g., -X.
89	Blank.
90- 92	Wind direction (ddd) in degrees.
93	Slash mark.
94- 96	Wind speed (fff) in knots.
97	G if gust, otherwise blank.
98-100	Gust speed, if any, left adjusted, blank fill.
101	Blank.
102-104	Sea level pressure (PPP) in tenths of millibars
105-107	Blanks.

108	Amount in oktas of lowest cloud layer, if any, or blank if no clouds.
109-110	Presence of cloud layer indicated by //. Type of cloud (such as: SC) can be reported here. If no cloud layers, a partial obscuration, if observed, is indicated by -X; otherwise beginning (CL) of word "CLEAR".
111-113	Cloud base in hundreds of feet, or if appropriate, remainder (EAR) of word "CLEAR".
114	Type of ceiling when layer constitutes a ceiling (e.g., E, W, A, M, R, B, etc.); - to indicate a thin layer, otherwise blank.
115-117	Reserved for tops. (Currently all blanks).
118	Blank.
119-128	Second lowest cloud layer, if observed. Same format as 108-117.
129	Blank.
130-139	Third lowest cloud layer, or lowest layer constituting a ceiling of more than 3 layers. Same format as 108-117.
140	Pressure tendency flag*.
141	Characteristic of pressure tendency (a).
142-143	Amount of pressure tendency (pp) in tenths of millibars.
144-145	Amount of precipitation (RR) which has occurred during previous 6 hours in and hundredths of inches (blanks or slash marks if missing).
146	Blank.
147-148	Whole inches of precipitation (left adjusted, blank fill).
149	Blank.
150-154	Cloud type group ($1C_LC_MC_H$). Left adjusted, blank fill U.S./Canada; ($C_LC_MC_HD_{M/H}D_L$)-Mexico cloud group.
155	Blank.
156-158	Maximum or minimum temperature in °C or °F as transmitted by station (left adjusted, blank fill).
159-160	Blank.
161-163	Altimeter setting in hundredths of inches.
164-201	Remarks section.
202-205	Month-date of report (mmdd).
206-216	Continuation of remarks if needed.

* +	Indicates pressure tendency greater than 9.9mb add 100 to pp to obtain correct tendency.
Blank	Pressure tendency less than 10.0mb.

```
         1         2         3         4         5         6         7         8
         0         0         0         0         0         0         0         0
*****************************************************************************************
         *         *         *         *         *         *         *         *
BET  BETHEL                  AK 70219  0041  N60.47 W161.48 1156 -05 -10 7.00
         020/012     930   8//015M                            829      15//
931 40393 90401  RADAT MISG 10SC         0103


FCA  KALISPELL/GLACIER PARK  MT 72779  0905  N48.18 W114.16 1149  25  24 2.00 S-
         000/000     135   9//007W                            23219          20
981 20020 90412 VSBY NE-SE 17 23219 9041 0103 2 20


MEH  MEACHEM            AMOS OR 99999  1236  N45.30 W118.24 1055  30  25
         250/003     163
993 PK WND 09 000                        0103


SAN  SAN DIEGO/LINDBERGH FLD CA 72290  0009  N32.44 W117.10 1150  58  53 7.00
         050/030     200   3//020     6//038M    6//250     000      1501  58
012  RADAT 72095                         0103


SMP  STAMPEDE PASS      AMOS WA 99999  1209  N47.17 W121.20 1151  28  28 0.50 S-
F        240/008     141   9//001W                            134
984 42520 20052 90443 90104 PK WND 13    0103

*****************************************************************************************
         1         2         3         4         5         6         7         8
         0         0         0         0         0         0         0         0
```