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NOAA Techniques Development Laboratory
Computer Program NWS TDL CP 96-1



RETRIEVING INDIVIDUAL OBSERVATIONS FROM SURFACE AVIATION OBSERVATION COLLECTIVES

Silver Spring, Md.
April 1996

U. S. DEPARTMENT OF
COMMERCE

National Oceanic and
Atmospheric Administration

National Weather
Service

PREFACE

The Techniques Development Laboratory's (TDL's) computer program (CP) series is a subset of TDL's technical memorandum series. The CP series documents computer programs written at TDL primarily for the Automation of Field Operations and Services (AFOS) computers.

The format for the series follows that given in the AFOS Handbook 5, Reference Handbook, Volume 6: Applications Programs, Part 1: Policy and Procedures, published by the Office of Technical Services/AFOS Operations Division.

NOAA Techniques Development Laboratory Computer Program NWS TDL

- CP 83-1 Gross Sectional Analysis of Wind Speed and Richardson Number. Gilhousen, Kemper, and Vercelli, May 1983. (PB83-205062)
- CP 83-2 Simulation of Spilled Oil Behavior in Bays and Coastal Waters. Hess, October 1983. (PB84-122597)
- CP 83-3 AFOS-Era Forecast Verification. Heffernan, Newton, and Miller, October 1983. (PB84-129303)
- CP 83-4 AFOS Monitoring of Terminal Forecasts. Vercelli, December 1983, (PB84-145697LL)
- CP 83-5 Generalized Exponential Markov (GEM) Updating Procedure for AFOS. Herrmann, December 1983. (PB84-154822LL)
- CP 84-1 AFOS Display of MDR Data on Local Map Background. Newton, July 1984. (PB84-220797)
- CP 84-2 AFOS Surface Observation Decoding. Perrotti, September 1984. (PB85-137586)
- CP 84-3 AFOS-Era Forecast Verification. Miller, Heffernan, and Ruth, September 1984. (PB86-148319LL)
- CP 85-1 AFOS Monitoring of Terminal Forecasts. Vercelli and Norman, May 1985. (PB85-236388LL)
- CP 85-2 AFOS Terminal Forecast Decoding. Vercelli, Norman, and Heffernan, October 1985. (PB86-147360LL)
- CP 85-3 AFOS-Era Forecast Verification. Ruth, Miller, and Heffernan, October 1985. (PB86-148319LL)
- CP 87-1 AFOS Terminal Aerodrome Forecast Formatting. Wantz and Eggers, July 1987. (PB88-10449LL)
- CP 87-2 AFOS-Era Forecast Verification. Ruth and Alex, July 1987. (PB88-125570LL)
- CP 87-3 Forecast Review. Wolf, July 1987. (PB88-125588LL)
- CP 87-4 AFOS Monitoring of MDR Data Using Flash Flood Guidance. Norman and Newton, October 1987. (PB88-137450LL)
- CP 87-5 AFOS Terminal Forecast Quality Control. Vercelli and Leaphart, December 1987. (PB88-169925LL)
- CP 88-1 AFOS Terminal Forecast Decoding. Vercelli and Leaphart, August 1988. (PB89-101240LL)
- CP 89-1 Structure Flow Diagram Generator. Adams, March 1989. (PB89-195978AS)
- CP 89-2 String Search. Adams, March 1989. (PB89-195986AS)
- CP 89-3 Extended Memory Library for AFOS Applications. Leaphart, June 1989. (PB92-216290)

(Continued on inside back cover)

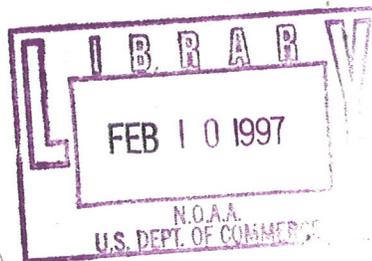
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RETRIEVING INDIVIDUAL OBSERVATIONS FROM
SURFACE AVIATION OBSERVATION COLLECTIVES

Robert A. Beasley

1. INTRODUCTION

This program, MOBSEP, allows one to retrieve individual surface observations from a variety of collectives which are available on the National Weather Service's (NWS's) Automation of Field Operations and Services (AFOS) computer system (NWS 1989 and 1994a) and store them as individual products (AFOS keys). Types of surface observations found in collectives include Surface Aviation Observations (SAO's), (NWS 1994b and Office of the Federal Coordinator for Meteorological Services and Supporting Research [OFCM] 1994) METAR observations (MTR's), (OFCM 1995) test SAO's (MOB's), and test METAR observations (MTT's).

Used in conjunction with the AFOS background scheduler program WATCHDOG (Schneider and Peterson 1991), MOBSEP allows one to obtain a continuous set of surface observations for an individual site within a collective. Hence, observations originally buried in a collective, can be stored on AFOS in a manner analogous to that of the majority of SAO's, namely one observation per AFOS product or key. This prevents the user from having to search through many previous versions and through many observations within a collective to find the specific site that he/she wishes to examine.

MOBSEP was originally designed to reduce the work involved with the analysis and performance assessment of uncommissioned ASOS sites. The program can be used to separate and store uncommissioned ASOS SAO's from the collective NMCMOBNKA as individual AFOS products or keys. With time, however, further modifications to MOBSEP were required to meet additional requirements. Enhancements included adding the ability to retrieve METAR/SPECI observations from collectives of such, separate SAO's from any SAO or MOB collective not just NMCMOBNKA (including the Federal Aviation Administration's (FAA) Automated Weather Observing System (AWOS) (FAA 1991), allowing additional collectives to be examined during a single execution, and letting the user specify the AFOS node for the output product.

In addition, the program has also been designed specifically to work with the SAO Decoder (SAODECII) (Beasley 1993) program. Special code within MOBSEP allows it to recognize that it has been called by SAODECII and hence prepares individual observations for decoding by SAODECII. This eliminated the need for SAODECII to decode entire collectives. MOBSEP is activated by SAODECII via the global "K" switch on the SAODECII command line.

Storing observations within collectives as separate AFOS products also renders these observations more amenable for use by a host of other programs. A few examples of such programs are the Satellite Composite State Weather Roundup (SCSWR) (Sunkel 1993), the Hourly Weather Roundup for the NOAA Weather Radio (HWRNWR) (Battel et. al. 1994), the Universal Graphic Generator (UGG) plot file program (PLTGEN) (Beasley 1993), and the AFOS Data Analysis or Mesoanalysis Program (ADAP) (Bothwell 1985).

2. METHODOLOGY AND SOFTWARE STRUCTURE

MOBSEP is a relatively simple program designed to achieve an otherwise laborious task. The objective is to read one or more collectives of SAO's, MOB's, MTR's, or MTT's from the AFOS database and retrieve observations from the collectives for those sites that have been designated for such by the user. Each observation separated is then stored as a separate product or key. Observations retrieved are stored as CCCNNNXXX (CCC = user specified AFOS node, NNN = SAO, MOB, MTR, or MTT, and XXX = site designated by user to be retrieved from the collective) in the AFOS database. The CCC and XXX for each site to be retrieved from the collective are specified in the Real Time Disk Operating System (RDOS) (Data General Corporation 1974 and 1978) file MOBLIST.ll, where "ll" represents any combination of two alphanumeric characters. Collectives to be searched for the sites listed in MOBLIST.ll are given in the RDOS file MOBKEYS.ll. See Fig. 1 for an example of a MOBKEYS file and Fig. 2 for an example of a MOBLIST file. The default value for the extension "ll" of the files MOBLIST and MOBKEYS is "SA", but may be changed by using the local "L" switch (see Section 6 - Part B). The extension "SA" is reserved for use by SAODECII when it swaps to MOBSEP and hence should not be used for other purposes.

Collectives are produced centrally and transmitted at specific intervals (e.g., 10 minutes) as additional stations are received. The total number of stations that can be transmitted in any one collective (e.g., NMCMOBNKA, CCCSAOC01, etc.) is quite large and usually the collectives transmitted near the hour contain a high percentage of the number of observations assigned to that collective. Collectives transmitted at other times throughout the hour, however, usually contain only a few special or late observations and hence represent only a small percentage of the total number of sites which belong to that collective. In fact it is even possible for a collective to contain only one observation. Some sample collectives of SAO, MOB, and MTT collectives are shown in Figs. 3, 4, and 5.

Generally, an individual forecast office is only interested in examining observations for sites within its area of jurisdiction. Use of this program will allow retrieval of only those observations desired. The retrieved observations, which are otherwise buried in a host of other non-desired ones, can then be examined in a chronological sequence. When used in conjunction with the SAODECII program, specified observations are retrieved for decoding immediately prior to the actual decoding process. This eliminates the old requirement of decoding the entire collective just to obtain one or more observations within the collective.

The first task of MOBSEP is to read the command line switches, which are detailed in Section 6 - Part B. As mentioned before, the collectives to be searched and the stations to be retrieved from the various collectives searched are specified in the RDOS files MOBKEYS.ll and MOBLIST.ll, respectively. The AFOS node (CCC) for each individually output observation is also specified through the file MOBLIST.ll. The product category is extracted from the key names given in MOBKEYS.ll.

The stations to be retrieved and the collectives to be examined are stored in memory during program execution. MOBSEP then opens the user specified collectives and inspects each line for those stations which the user has designated for retrieval. Observations for stations satisfying these

requirements are then written to separate RDOS files named CCCNNNXXXX, where CCC denotes the AFOS node, NNN = SAO, MOB, MTT, or MTR, and XXX denotes the call letters of the station which has been retrieved from the collective. These RDOS files are subsequently stored in the AFOS database. Fig. 6 illustrates the logical flow of the program.

In order to reap the full benefits of this program when not used in conjunction with the SAO Decoder, it is intended that MOBSEP be included as a regular part of the AFOS background scheduler program WATCHDOG. This will allow automatic retrieval and storage of desired observations. MOBSEP can be activated upon receipt of a collective, provided the AFOS key name for the product identifier is included in the WATCHDOG WDSCHD file.

Previous versions of collectives may also be examined by MOBSEP. By default, 10 previous versions of each collective are examined for user specified stations. This can be increased to 126 versions or decreased to one version through use of the local "V" switch. The global "P" switch should be used when no previous versions of the collectives are to be examined. See Section 6 - Part B for details on all of the global and local switches.

3. PROCEDURES

MOBSEP may be executed from either the background terminal or the Alphabetic Display Module (ADM), although it should principally be executed automatically through the WATCHDOG scheduler. It can also be activated by the SAO Decoder program through use of the global "K" switch on the SAODECII command line.

As a stand alone program, it is initiated at the background terminal simply by typing:

```
MOBSEP/E/P kk/K ll/L sss1/S sss2/S sss3/S ... sssn/S vv/V
```

This entry will (1) read and set the optional command line switches (defined in Section 6 - Part B), (2) retrieve the specified observations listed in the RDOS file MOBLIST.ll from the collectives listed in the RDOS file MOBKEYS.kk, and (3) store each retrieved observation in the AFOS database as an individual product or key.

The keys which are to be examined are listed in the RDOS file MOBKEYS.kk (where kk = "SA" by default but which may be changed by the user through the local "K" switch). The individual observations which are to be retrieved from the indicated collectives are specified in the RDOS file MOBLIST.ll (where ll = "SA" by default but which may be changed by the user through the local "L" switch). When only one or two stations are to be retrieved from the collective, the user may prefer to use the command line local "S" switch for specification of the stations which are to be retrieved instead of maintaining an RDOS file. Please note, however, that for SAODECII to use MOBSEP the files MOBKEYS.SA and MOBLIST.SA must exist and be defined.

4. CAUTIONS

1. When the "no previous version option" is set (global "P" switch), only the most recent version of an observation will be retrieved from the collectives and stored as an AFOS product. A flag is set internally

which prevents older observations from being stored or overwriting the most recent observation. Non-current observations cannot be retrieved without purging the current and all preceding observations back to the one desired.

2. The maximum number of different collectives that can be examined per execution of MOBSEP is 100.
3. The maximum number of observations that can be retrieved per execution of MOBSEP is 500 regardless of the number of different collectives to be examined.
4. When specifying the individual stations which are to be retrieved from the indicated collectives, you must enter the station call letters in international METAR format (i.e., KDFW for Dallas-Fort Worth).
5. The collectives are transmitted often to accomodate hourlies and specials for all of the observations which are assigned to the collectives. The observations are received centrally at varying intervals and hence the number of observations transmitted will vary widely from one version of a collective to the next. For storage purposes, assume that the collectives are transmitted at 10-minute intervals.

5. REFERENCES

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6. PROGRAM INFORMATION AND PROCEDURES FOR INSTALLATION AND EXECUTION

PART A: PROGRAM INFORMATION and INSTALLATION PROCEDURES

PROGRAM NAME: MOBSEP

Revision No.: 3.11

FUNCTION: Retrieves user specified SAO or METAR surface observations from collectives of SAO's, MOB's, MTR's, or MTT's and stores them in the AFOS database as individual products.

PROGRAM INFORMATION:

Development Programmer(s):

Robert A. Beasley

Location: Techniques Development
Laboratory

Phone: 301-713-0056

Language: FORTRAN IV/Rev 5.57
MACRO Assembler/Rev 6.30

Maintenance Programmer(s):

Robert A. Beasley

Location: Techniques Development
Laboratory

Phone: 301-713-0056

Save file creation dates: MOBSEP.SV

Revision 1.00	-	November 1994
Revision 1.10	-	November 1994
Revision 2.00	-	July 1995
Revision 3.00	-	August 1995
Revision 3.10	-	September 1995
Revision 3.20	-	February 1996

Running time:

Approximately 1.6 seconds per observation retrieved.

Disk space:

Program files:

MOBSEP.SV - 38 RDOS blocks

Data files:

MOBKEYS.kk - ((10 * nstns)/512) blocks

MOBLIST.ll - ((6 * nstns)/512) blocks

PROGRAM REQUIREMENTS

Program files:

NAME

MOBSEP.SV

Data files:

<u>NAME</u>	<u>Disk location</u>	<u>READ/WRITE</u>	<u>COMMENTS</u>
MOBKEYS.kk	SYSZ	R	"kk" denotes any combination of alphanumeric characters.
MOBLIST.11	SYSZ	R	"11" represents any combination of alphanumeric characters.

AFOS products:

- (these are just some examples of collectives from which individual observations can be retrieved and stored as separate products. Any valid SAO or METAR collective can be used.)
- NMCSAOE01 (Eastern region AWOS collective.)
 - NMCSAOC01 (Central region AWOS collective.)
 - NMCSAOS01 (Southern region AWOS collective.)
 - NMCSAOW01 (Western region AWOS collective.)
 - NMCMOBNKA (contains uncommissioned ASOS observations for FAA expansion sites.)
 - IMXSAOMX# (collectives of Mexican METAR observations, where # = 1, 2, 3, 4, or 5.)
 - CCCMTTSYT (test product available only prior to implementation of METAR.)
 - CCCMTTSPC (test product available only prior to implementation of METAR.)
 - CCCMOXXXX (for each site to be retrieved from NMCMOBNKA.)
 - CCCSAOSXXX (for each site to be retrieved NMCSAO&01, where & = E, C, S, or W.)
 - CCCMTTXXX (for each site to be retrieved from CCCMTTSYT or CCCMTTSPC or IMXSAOMX#.)

LOAD LINE

```
RLDR/P/E MOBSEP MOBSEP.LM/L MOBREV STNSRCH NAFREAD AFDTIM DCMPR ^
INITAR IPANDEC ILEN CCAT BCONVRT SEARCH ICEQAL BMOVE ^
<BG UTIL SYS FORT AFOSE>.LB
```

PROGRAM INSTALLATION

1. Move the executable module MOBSEP.SV to the master partition or to an applications partition with links to the master partition.
2. Add any or all of the products listed above under "AFOS PRODUCTS" to your database. Most of the collectives are transmitted several times per hour because of the large number of stations which are assigned to

each individual collective. Therefore, you should store several versions of each collective or place them on time purge for the appropriate number of hour's worth of observations you wish to keep. If you place it on version purge, be aware that the frequency of transmission is on the order of every 5 minutes or approximately 12 times an hour (generally with different stations in each collective).

3. Create MOBKEYS.SA and MOBLIST.SA files (see Figs. 1 and 2) for use with the SAODECII program. Then, if required, create one or more additional MOBKEYS and MOBLIST files for non-SAODECII purposes using extensions other than "SA".

PART B: PROGRAM EXECUTION and ERROR CONDITIONS

PROGRAM NAME: MOBSEP

Revision No.: 3.11

PROGRAM EXECUTION

1. Run MOBSEP.

At the background terminal or Dasher enter:

MOBSEP/E/P kk/K ll/L sss₁/S sss₂/S sss₃/S ... sss_n/S vvv/V

Definition of switches:

GLOBAL

/E = List on the background terminal those observations which are stored correctly in the database and those which are duplicates.

/P = Examine only the current version of the collectives from which observations are to be retrieved.

LOCAL

sss_n/D = Denotes the station(s) for which observations are to be retrieved from the collectives listed in the MOBKEYS.kk file. Any number of stations may be listed successively on the command line in this manner. However, it is suggested that the MOBLIST.ll file be used if more than three stations are to be retrieved.

kk/K = Specifies the list (MOBKEYS.kk) of SAO/METAR collectives which are to be examined and from which individual observations will be retrieved. This file is required.

ll/L = Specifies the list (MOBLIST.ll) of stations for which observations are to be retrieved and stored as individual products.

vvv/V = Denotes the number of previous versions of the collectives which are to be examined. "vvv" may be any number from 0 to 127. No previous versions are checked when the global "P" switch is used.

Defaults (Switch not used):

Global

/E = Do not list on the background terminal observations which have been retrieved.

/P = Examine the current version and "vvv" previous versions of the collectives listed in the MOBKEYS.kk file. If the local "V" switch is not used on the command line, then all previous versions of the collectives will be examined.

Local

- /K = Use the default list of SAO/METAR products, MOBKEYS.SA, to obtain the observations for the sites specified on the command line or in the MOBLIST file. "SA" is the default extension, but may be changed through the local "K" switch.
- /L = Use the default list of stations, MOBLIST.SA, for which observations are to be retrieved from the SAO/METAR collectives specified in the MOBKEYS file. "SA" is the default extension, but may be changed through the local "K" switch.
- /S = Obtain the list of stations for which observations are to be retrieved from the collectives NMCMOBNKA and/or NMCSAO&01 and stored as individual products, from the RDOS file MOBLIST.SA. "SA" is the default extension but may be changed through the "L" local switch.
- /V = Retrieve only the current version of the product if the global "P" switch is also used or all versions of the product if the global "P" switch is not used.

PROGRAM ERROR CONDITIONS

ERROR CONDITIONS

MEANING

MOBLIST.XX NOT FOUND

The RDOS file MOBLIST.XX does not exist. This file contains the station identifiers for those stations which are to be retrieved from the collectives listed in MOBKEYS.XX. As a minimum, the MOBLIST.SA file must be defined.

MOBKEYS.XX NOT FOUND

The RDOS file MOBKEYS.XX does not exist. This file contains the AFOS product (key) names which are to be searched for the stations listed in MOBLIST.XX. As a minimum, the MOBKEYS.SA file must be defined.

UNABLE TO OPEN AFOS KEY CCCNNNXXXX

The specified collective CCCNNNXXXX could not be opened. Make sure that the product exists in the database.

PROBLEM READING AFOS KEY CCCNNNXXXX

The specified collective was found in the database but cannot be read. Check to make sure that the product is good. It may be necessary to purge the product or run a MODIFY.

ATTEMPT TO EXCEED 500 INPUT STATIONS

Attempt was made to retrieve more than 500 individual observations during a single execution of MOBSEP. If more than 500 stations are to be separated, make separate runs of MOBSEP

ATTEMPT TO EXCEED 100 INPUT KEYS

More than 100 collectives were specified in the MOBKEYS.XX file. If more than 100 keys need to be examined, make separate runs of MOBSEP.

CHIKORD
FTWKDFW
LAXKLAX
MSPKMSP
SATKSAT
SLCKSLC
TOPKTOP

NMCMOBNKA
STLMTTSYT
STLMTTSPC
STLSAOC01
STLSAOE01
STLSAOS01
STLSAOW01

Figure 1. Sample MOBLIST.ll file which specifies the stations which are to be retrieved from the collectives listed in the MOBKEYS.kk file. The first three characters specify the AFOS node for the site being retrieved, the fourth character the international block identifier, and the last three characters the station identifier.

Figure 2. Sample MOBKEYS.kk file specifies the keys from which observations are to be retrieved. The full keyname must be specified in the file. This example uses the AFOS node STL.

SMCSAOC01
SAUC82 KNKA 052005

CBG SA 1956 AO2 CLR BLO 120 10 2/-12/2805/040
ETH SA 1955 AO2 CLR BLO 120 10 2/-14/0000/041
FSE SA 1955 AO2 CLR BLO 120 10 -3/-21/0000/032
UGN SA 1945 CLR 15 18/4/2910/028
MVE SA 1955 AO2 MM 10 5/-8/3403/043
OWA SA 1955 AWOS CLR BLO 120 10 5/-7/3305/039
I26 SA 1956 AWOS CLR BLO 120 10 29/10/2213G18/041
19D SA 1955 AWOS CLR BLO 120 10 7/-11/2805/040
GPZ SA 1955 AWOS CLR BLO 120 10 1/-16/3403/032
ARG SA 1955 AWOS CLR BLO 120 10 32/14/2115G20/046
SGT SA 1954 AWOS M35 BKN 10 29/12/1515/048
EWK SA 1956 AWOS CLR BLO 120 10 38/19/0103/029
CWI SA 1956 AWOS CLR BLO 120 10 18/7/3008/035
AIZ SA 1954 AWOS CLR BLO 120 10 36/13/3005/032
GBD SA 1955 AWOS M 10 37/27/3609/028
SQI SA 1954 AWOS M 10 21/6/3206/033
FAM SA 1955 AWOS CLR BLO 120 10 33/12/2606/033

Figure 3. A sample collective of AWOS SAO's from the Central Region of the NWS from which individual observations can be retrieved and stored as separate products with the MOBSEP program.

ZCZC NMCMOBKA
SXUS91 KNKA 052000

2B4 TA 1953 AO2 CLR BLO 120 10+ 276/16/-5/2205/034/ TEST \$
3R5 TA 1952 AO2 M20 OVC 10+ 302/50/32/2210/040/ TEST TNO \$
ADQ TA 1953 AO2 M20 OVC 10+ 654/23/18/3207/851/ TEST TNO
AKN TA 1952 AO2 CLR BLO 120 10+ 735/-9/-20/3512/874/ TEST
AKO TA 1953 AO2A CLR BLO 120 M 236/46/27/1807/022/ TEST \$
AIA TA 1953 AO2 CLR BLO 120 10+ 229/45/27/2606/014/ TEST
ANC TA 1953 AO2 MM 7 661/13/09/0000/852/ TEST TNO \$
ANN TA 1953 AO2 M6V BKN 11 OVC 10+ 801/45/44/1420G28/894/ TEST CIG
6V9 TNO PK WND 1530/1933
ATY TA 1953 AO2 M50 OVC 10+ 316/04/-5/2104/033/ TEST
A21 TA 1953 AO2 M80 OVC 10+ 658/15/12/0000/852/ TEST OVC V BKN \$
A8L TA 1953 AO2 7 SCT M21 BKN 27 OVC 11/4VS- 875/16/10/3317G35/920/
TEST VSBY 3/4V21/2 TNO PCPN M PK WND 0136/1923 \$
BIG TA 1953 AO2 CLR BLO 120 31/2H 705/-11/-17/2804/849/ TEST SE39
\$
BRW TA 1953 AO2 M65 OVC 3H 018/-16/-21/0417/958/ TEST \$
BTT TS 1953 AO2 11 SCT M24 BKN 30 OVC 11/2S-F 778/-15/-19/0000/879/
TEST PCPN M \$
BWG TA 1953 AO2 M110 OVC 10+ 322/28/00/2214G18/045/ TEST ZRNO
PRESFR \$
CDB TP 1955 AO2 MM 21/2H 756/15/06/3528G33/880/ TEST PWINO PK WND
3530/1955 \$
CNU TA 1954 AO2 CLR BLO 120 M 270/37/15/0000/030/ TEST \$
EMP TA 1954 AO2A CLR BLO 120 10+ 276/38/18/0104/029/ TEST
ENA TA 1953 AO2 M19 OVC 5S- 655/10/M/1005/850/ TEST SB48 PCPN 0000
\$
ENN TA 1953 AO2 M41 BKN 110 OVC 7 720/-14/-21/3306/866/ TEST BKN V
SCT
ESF TA 1953 AO2 MM M M/M/M/MM/056/ TEST PWINO PRESFR
EWB TA 1953 AO2 CLR BLO 120 10+ 271/17/-5/2309/033/ TEST ZRNO \$
FIT TA 1952 AO2 CLR BLO 120 10+ 259/16/-5/2207/027/ TEST TNO ZRNO
GCK TA 1954 AO2A CLR BLO 120 10+ 263/48/24/0108/026/ TEST TNO
GKN TA 1953 AO2 M12 OVC 11/2S- 690/00/-5/MM/845/ TEST PCPN M \$
GVW TA 1953 AO2 CLR BLO 120 10+ 297/32/17/3404/032/ TEST TNO \$
HDO TA 1952 AO2 M16 OVC 10+ 301/47/36/1905/042/ TEST PRESFR
HEI TA 1953 AO2 CLR BLO 120 10+ 223/21/14/1608/006/ TEST
HLC TA 1953 AO2A CLR BLO 120 10+ 272/41/17/0506/028/ TEST
HOM TA 1953 AO2 M13 OVC 11/2S- M/M/M/2510/852/ TEST TNO PCPN M \$
HUT TA 1953 AO2 CLR BLO 120 10+ 264/43/22/3404/029/ TEST
I14 TA 1953 AO2 M95 BKN 10+ 283/21/07/2612G18/032/ TEST TNO
I15 TA 1953 AO2 120 SCT 10+ 283/20/02/2215G22/031/ TEST
ILI TA 1953 AO2 90 SCT 10+ 714/-7/-15/0000/868/ TEST PWINO \$
IMT TA 1954 AO2 CLR BLO 120 10+ 266/08/-7/3109/022/ TEST TNO
SB00E10B35E45 ZRNO PCPN 0000 \$
JNU TA 1953 AO2 MM 10+ 763/38/36/MM/883/ TEST TNO \$
KAL TA 1953 AO2 CLR BLO 120 7 792/-28/M/2306/889/ TEST \$
KTN TA 1953 AO2 M14 OVC 10+R- 791/45/43/1415G20/891/ TEST OVC V BKN
TNO RE33B50 PCPN M

Figure 4. A sample collective of uncommissioned test FAA ASOS observations from which individual observations can be retrieved and stored as separate products with the MOBSEP program.

NMCMTTSYT
SXUS80 KWBC 051955
METAR KAVP 051950Z 25012KT 15SM OVC200 M12/M21 A3029 RMK SLP280
T11221205=
METAR KBWI 051951Z 20012KT 20SM SCT250 M07/M18 A3044 RMK SLP312
T10671183=
METAR KCLT 051950Z 21009KT 15SM OVC200 M03/M14 A3054 RMK SLP354
T10281138=
METAR KGSP 051950Z 25007KT 30SM SCT110 OVC250 M02/M09 A3051 RMK
SLP346 T10221094=
METAR KHOU 051950Z 17010KT 15SM OVC031 12/04 A3047 RMK SLP318
T01170045=
METAR KIAH 051950Z 15010KT 15SM OVC037 12/00 A3047 RMK SLP316
T01170001=
METAR KISN 051950Z 19010KT 10SM SCT250 M06/M11 A3003 RMK SLP211
T10611105=
METAR KLEX 051950Z 22010G19KT 10SM SCT090 SCT250 M07/M17 A3039 RMK
SLP313 T10671172=
METAR KMFJ 051947Z 13010KT 10SM BKN070 18/M01 A3039 RMK T01781005=
METAR KNEW 051950Z 01007KT 10SM SKC 04/M01 A3064 RMK K LYN W-NE CU
VCNTY STN SE-SW SLP376 T00441005=
METAR KART 051950Z 18012KT 7SM -SHSN SCT020 OVC030 M11/M20 A3021
RMK SLP241 T11111199=
METAR KBNA 051950Z 21007KT 12SM SCT130 BKN200 M03/M16 A3053 RMK
SLP350 T10331161=
METAR KCPR 051950Z 22024G30KT 50SM SCT045 OVC200 08/M01 A3014 RMK
PK WND 2231/19 SLP210 T00781011=
METAR KDLH 051951Z 31008KT 15SM SCT250 M14/M24 A3026 RMK SLP292
T11441238=
METAR KGLS 051950Z 15014KT 15SM SCT050 BKN100 13/05 A3048 RMK
SLP328 T01280050=
METAR KGRB 051950Z 26010KT 15SM SKC M13/M22 A3028 RMK SLP276
T11331216=
METAR KIAD 051950Z 19012KT 20SM OVC250 M07/M18 A3044 RMK SLP314
T10721183=
METAR KINL 051950Z 27007KT 15SM SCT025 SCT200 M17/M24 A3032 RMK
SLP308 T11721244=
METAR KJAX 051950Z RMK CJ8?! MIASAOJAX=
METAR KMSP 051952Z 00000KT 15SM SCT250 M12/M22 A3043 RMK SLP327
T11171222=
METAR KMSS 051950Z 23012G18KT 10SM SCT030 OVC080 M11/M18 A3023 RMK
SLP238 T11111177=
METAR KORF 051950Z 23016KT 15SM SCT030 BKN250 M07/M16 A3055 RMK
SLP344 T10671155=
METAR KSLC 051950Z 20005KT 1SM R34R/P6000FT BR OVC004 01/M02 A3033
RMK / F5/ TWR VSBY 1 1/4 SLP290 T00061022=
METAR KABQ 051952Z 00000KT 60SM SCT250 12/M10 A3034 RMK WND LGT
AND V SLP254 T01221099=
METAR KBDL 051950Z 25008KT 25SM OVC200 M08/M21 A3031 RMK SLP270
T10781205=
METAR KFTW 051950Z 18014KT 15SM SKC 12/00 A3035 RMK SLP279
T01220001=

Figure 5. A sample test METAR collective transmitted from the NWS' Telecommunications Gateway where selected SAO's are converted to METAR.

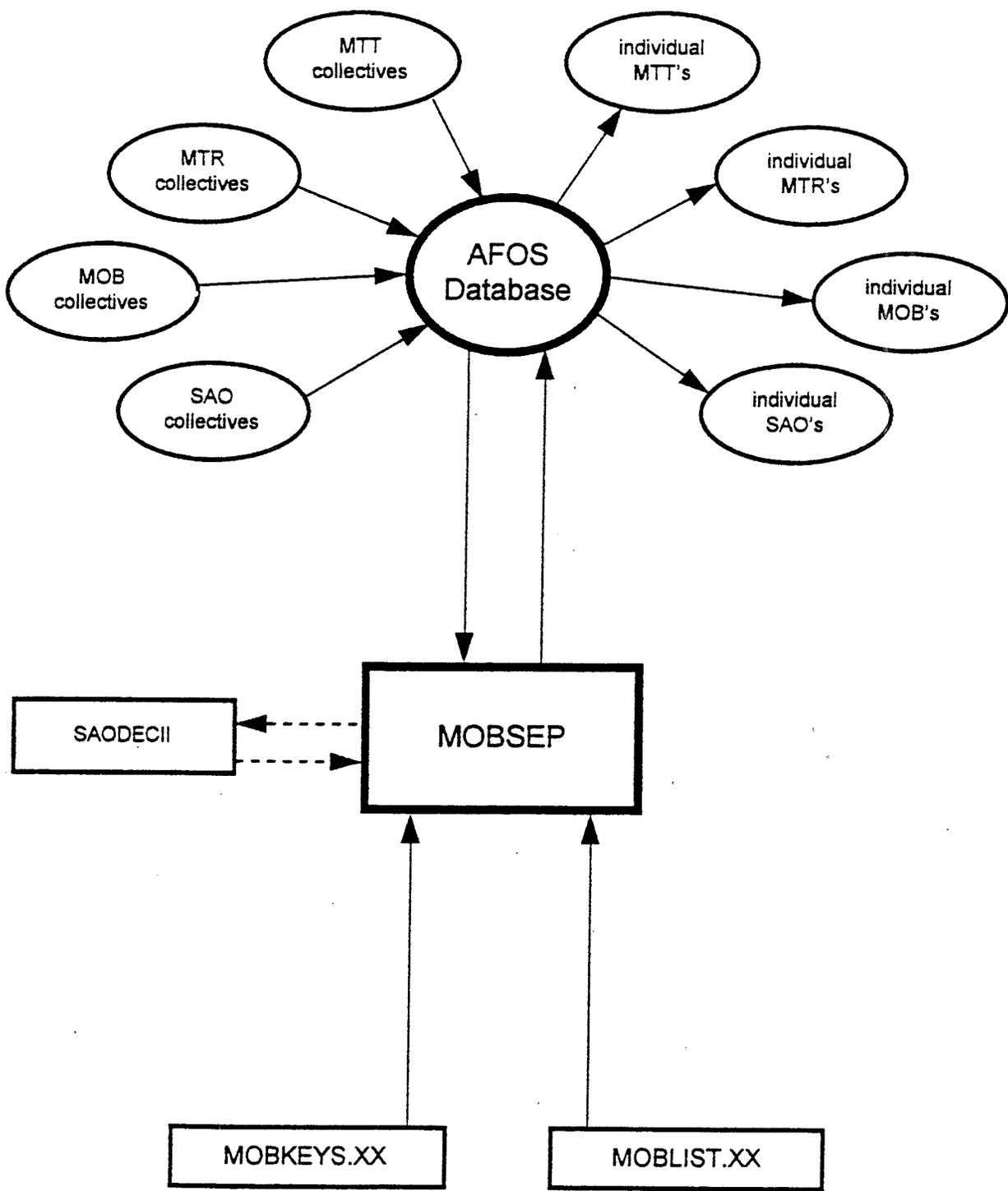


Figure 6. Logical program flow for the MOBSEP program.

(Continued from inside front cover)

Computer Program NWS TDL

- CP 92-1 Separating Individual Synoptics from within Synoptic Collectives. Beasley, August 1992. (PB92-232313)
- CP 93-1 AFOS Profiler Software System. Battel, Leaphart, Moeller, and Petrie, August 1993. (PB94-112711)
- CP 93-2 AFOS Surface Observation Decoding. Beasley, September 1993. (PB94-112042)
- CP 93-3 Decoding Satellite Cloud Products. Beasley, October 1993. (PB94-116845)
- CP 93-4 Decoding Nested Grid Model Statistical Forecasts. Beasley, October 1993. (PB94-129210)
- CP 93-5 Retrieving Alphanumeric and Graphic Products from the AFOS Database through the Background Partition. Beasley, November 1993. (PB94-143245)
- CP 93-6 NOAA Weather Radio Climatological Data Reports. Calkins and Battel, December 1993. (PB94-143252)
- CP 94-1 NOAA Weather Radio Hourly Weather Roundup Formatter. Battel, Kokolis, and Calkins, March 1994. (PB94-164126)
- CP 94-2 Miscellaneous Disk Utility Application Programs for the AFOS Background Partition. Beasley, April 1994. (PB94-181328)
- CP 94-3 AFOS Terminal Aerodrome Forecast Encoding. Wantz, June 1994. (PB94-203247)
- CP 94-4 A Utility for Examining the Contents of DATAKEY0. Beasley, July 1994. (PB95-104204)
- CP 94-5 AFOS Terminal Forecast Quality Control. Vercelli and Leaphart, July 1994. (PB95-104196)
- CP 95-1 An Alternative Program to Piledit for Generating an AFOS Trans File. Wantz, December 1995. (PB96-143854)