

Identification\_Information:

Citation:

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Originator: Air Force Weather Agency (AFWA), Offutt AFB, NE

Publication\_Date: 19880122

Title: Aircraft Observation Files

Geospatial\_Data\_Presentation\_Form: Planetary

Publication\_Information:

Publication\_Place: Asheville, NC

Publisher: Air Force Combat Climatology Center

Description:

Abstract: This database contains meteorological data collected from military and civilian aircraft. elements contained is this dataset include wind direction, wind speed, D-value, temperature, dew point depression, altitude of mandatory pressure level, frequency of turbulence, intensity of turbulence, type of turbulence, cloud and contrail data, icing data, in-flight and off-course weather, flight visibility, and radar data.

Purpose: Support DoD projects.

Time\_Period\_of\_Content:

Time\_Period\_Information:

Range\_of\_Dates/Times:

Beginning\_Date: 19751001

Ending\_Date: Present

Currentness\_Reference: From the data

Status:

Progress: In work

Maintenance\_and\_Update\_Frequency: Daily

Spatial\_Domain:

Bounding\_Coordinates:

West\_Bounding\_Coordinate: -180

East\_Bounding\_Coordinate: 180

North\_Bounding\_Coordinate: 90

South\_Bounding\_Coordinate: -90

Keywords:

Theme:

Theme\_Keyword\_Thesaurus: None

Theme\_Keyword: Aircraft Weather Observations

Theme\_Keyword: Weather Observations

Theme\_Keyword: RECCO Aircraft Weather Observations

Theme\_Keyword: PIREPS Aircraft Weather Observations

Theme\_Keyword: AIREPS Aircraft Weather Observations

Place:

Place\_Keyword\_Thesaurus: None

Place\_Keyword: Global

Stratum:

Stratum\_Keyword\_Thesaurus: None

Stratum\_Keyword: Troposphere

Stratum\_Keyword: Stratosphere

Temporal:

Temporal\_Keyword\_Thesaurus: None

Temporal\_Keyword: None

Access\_Constraints: Access through AFCCC is limited to DoD agencies and their contractors. All other requests are filled through the National Climatic Data Center in Asheville, N.C.

Use\_Constraints: None

Point\_of\_Contact:

Contact\_Information:

Contact\_Person\_Primary:

Contact\_Person: Branch Chief, AFCCC/DOD  
Contact\_Organization: AFCCC/DOD

Contact\_Address:

Address\_Type: Mailing and Physical  
Address: 151 Patton Avenue, Room 120  
City: Asheville  
State\_or\_Province: NC  
Postal\_Code: 28801-5002  
Country: USA

Contact\_Voice\_Telephone: (828) 271-4299  
Contact\_Voice\_Telephone: DSN (312) 673-9006  
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Contact\_Facsimile\_Telephone: DSN 673-9024  
Contact\_Electronic\_Mail\_Address: dod@afccc.af.mil  
Hours\_of\_Service: 0730-1630 Eastern Time M-F

Data\_Set\_Credit: Collected and decoded by the Air Force Weather Agency  
(AFWA)

Security\_Information:

Security\_Classification\_System: DoD  
Security\_Classification: Unclassified  
Security\_Handling\_Description: None

Data\_Quality\_Information:

Logical\_Consistency\_Report: Daily automated gross limit checks are run against the aircraft data after they are loaded into the ingest tables where problems identified can be investigated manually. AFCCC does not make any automated changes to the aircraft data. No quality flags are used in the aircraft data set.

Completeness\_Report: The earliest aircraft report in the archive is from October 01, 1975. Only the last one-hundred twenty days of aircraft reports are maintained in Oracle tables. After one-hundred twenty days the data from the Oracle tables is "taken down" and stored in a flat file archive.

Lineage:

Process\_Step:

Process\_Description: The Air Force Weather Agency, Offutt AFB, NE collects data from reporting stations around the world and decodes this data. The data arrives from AFWA to AFCCC, Asheville, NC for processing and storage. A program is used to take the raw data, remove any inconsistencies in the data and run some gross limit checks. The data is then loaded into Ingest tables and later archived.

Process\_Date: unknown

Entity\_and\_Attribute\_Information:

Detailed\_Description:

Entity\_Type:

Entity\_Type\_Label: Aircraft Observations  
Entity\_Type\_Definition: 1. AIRCRAFT OBSERVATION FILES  
1.1 Preface.

Data item definitions for items are provided at the end of this preface, providing definition of data items, position number for mandatory data items, field lengths for variable data items, minimum/maximum values of data, and values for missing data items.

1.2 Data Sequence.

data item order:

Data will be sequenced using the following

1. GEOPHYSICAL-POINT-OBSERVATION date
2. GEOPHYSICAL-POINT-OBSERVATION time
3. GEOPHYSICAL-POINT-OBSERVATION
4. GEOPHYSICAL-POINT-OBSERVATION

latitude coordinate

longitude coordinate

### 1.3 Record Structure. AFCCC/DOO

Each record is of variable length and is comprised of a mandatory data section and may also contain an additional and remarks data sections.

### 1.4 Mandatory Data Section.

The beginning of each record provides information about the report including date, time, and observation location information. Data items transmitted will use positions identified in the applicable data item definition. The mandatory data section is 79 characters long.

### 1.5 Additional Data Section.

Additional data is provided after the mandatory data. This data contains information of significance and/or which are received with a high degree of frequency. Group indicators are used to note when data is present. If all data items in a group are missing, the entire group is not reported. If no groups are reported the section is omitted. The additional data section is of variable length with a minimum length of 0 and a maximum length of 163 (160 characters plus a 3 character section identifier) characters.

### 1.6 Remarks Data Section.

The non-decodable (remarks) data items are provided if they exist. The remarks data section is variable in length with a minimum of 0 characters and a maximum of 253 (250 characters plus a 3 character section identifier) characters.

### 1.7 Missing Values.

Missing values for any non-signed item are filled (i.e., 999). Missing values for any signed item are positive filled (i.e., +99999).

### 1.8 Longitude and Latitude Coordinates.

Longitudes will be reported with negative values representing longitudes west of 0 degrees, and latitudes will be negative south of the equator

### 1.9 Aircraft Observation Files Data Item

Definitions.

POS: 1-4

TOTAL RECORD LENGTH

The total record character count to include additional data and remarks sections.

Cannot equal 9999 = missing.

POS: 5-7  
 ADDITIONAL DATA COUNT  
 The total character count of the  
 additional data section of the record to include  
 non-decodable (remarks) section of the  
 record.  
 Cannot equal 999 = missing.

POS: 8-10  
 REMARKS LENGTH  
 The total character count of the  
 remarks section of the record.  
 Cannot equal 999 = missing.

POS: 11-16  
 GEOPHYSICAL-POINT-OBSERVATION latitude  
 coordinate  
 The latitude coordinate of a  
 GEOPHYSICAL-POINT-OBSERVATION.  
 Latitude is positive northward and  
 negative southward from the equator.  
 MIN: -90000 MAX: +90000  
 SCALING FACTOR: 1000  
 +99999 = missing  
 UNITS: Degrees

POS: 17-23  
 GEOPHYSICAL-POINT-OBSERVATION  
 longitude coordinate  
 The longitude coordinate of a  
 GEOPHYSICAL-POINT-OBSERVATION. Longitude is positive  
 eastward and negative westward from  
 the prime meridian.  
 MIN: -179999 MAX: +180000  
 SCALING FACTOR: 1000  
 +999999 = missing  
 UNITS: Degrees

POS: 24-31  
 GEOPHYSICAL-POINT-OBSERVATION date  
 The date of a GEOPHYSICAL-POINT-  
 OBSERVATION. Date comprised of the integer values  
 0-9 in the format YYYYMMDD. YYYY can  
 be any positive integer value; MM is restricted to  
 values 01-12; and DD is restricted to  
 values 01-31.  
 MIN: 00000101 MAX: 99991231

POS: 32-35  
 GEOPHYSICAL-POINT-OBSERVATION time  
 The time of a GEOPHYSICAL-POINT-  
 OBSERVATION. A general domain comprised of the  
 integer values (0-9) in the format  
 HHMM. HH is restricted to the values 00-23; MM is restricted  
 to the values 00-59.  
 MIN: 0000 MAX: 2359

geophysical observation and forecast.  
the characters in the ASCII character set.

POS: 36-40  
GEOPHYSICAL-REPORT-TYPE code  
The code that denotes the type of

DOM: A specific domain comprised of

RECCO = Aircraft Reconnaissance Report  
AIREP = Aircraft Report  
ASDAR = Aircraft-Satellite Data

Acquisition Radar Report (IN AIREP FORMAT)

PIREP = Pilot Report  
99999 = Missing

elevation dimension  
OBSERVATION relative to a  
This attribute can equal 99999 for missing.

POS: 41-45  
GEOPHYSICAL-POINT-OBSERVATION  
The elevation of a GEOPHYSICAL-POINT-  
stated VERTICAL-REFERENCE-DATUM.

MIN: 00000 MAX: 99998

UNITS: Meters

identifier  
characters, assigned to represent the tail,  
aircraft.  
Missing.

POS: 46-51  
AIRCRAFT IDENTIFICATION-NUMBER  
The unique value, or set of  
or wing number of an individual  
This attribute can equal 999999 =

direction, between true north and the direction from which  
atmosphere. This attribute can equal 999 = Missing.

POS: 52-54  
WIND-OBSERVATION-LEVEL direction angle  
The angle, measured in a clockwise  
the wind is blowing at a level in the

MIN: 001 MAX: 360

UNITS: Degrees true

characteristics of the wind observation.  
ASCII characters and a 9.

POS: 55-55  
WIND-OBSERVATION-LEVEL type code  
The code that denotes the

DOM: A specific domain comprised of

C = Calm wind  
N = Normal  
V = Variable wind  
9 = Missing

POS: 56-59  
WIND-OBSERVATION-LEVEL speed rate

speed of the wind at a level in the atmosphere. This  
UNITS: Meters per second

The rate that represents the measured  
value can equal 9999 = Missing.  
MIN: 0000 MAX: 2000

height dimension  
ATMOSPHERIC-PRESSURE-OBSERVATION-LEVEL.  
Missing.  
UNITS: Geopotential meters

SCALING FACTOR: 10  
POS: 60-65  
ATMOSPHERIC-PRESSURE-OBSERVATION-LEVEL

reporting code  
reporting the ATMOSPHERIC-PRESSURE-  
the ASCII characters (0-2) and a 9.

The geopotential height of an  
This attribute can equal +99999 =  
MIN: -00400 MAX: +99998

height  
for surface station

POS: 66-66  
ATMOSPHERIC-PRESSURE-OBSERVATION-LEVEL  
The code that denotes the method for  
OBSERVATION-LEVEL.  
DOM: A specific domain comprised of  
0 = Height at pressure level  
1 = Departure from standard atmosphere  
2 = Nearest standard isobaric level  
9 = Missing

temperature  
TEMPERATURE-OBSERVATION-LEVEL.  
Missing.  
UNITS: degrees Celsius

POS: 67-71  
AIR-TEMPERATURE-OBSERVATION-LEVEL air  
The temperature of the air at an AIR-  
This attribute can equal +9999 =  
MIN: -1100 MAX: +0630  
SCALING FACTOR: 10

point temperature  
atmosphere, to which a given parcel of air must be  
vapor content in order for saturation to occur.  
Missing.  
UNITS: degrees Celsius

POS: 72-76  
AIR-TEMPERATURE-OBSERVATION-LEVEL dew  
The temperature, at a level in the  
cooled at constant pressure and water  
This attribute can equal +9999 =  
MIN: -1100 MAX: +0630  
SCALING FACTOR: 10  
POS: 77-77

frequency code

occurrence of turbulence reported by an aircraft.

the ASCII characters (1-5) and a 9.

intensity code

turbulence reported by an aircraft.

the ASCII characters (0-7) and a 9.

code

turbulence reported by an aircraft.

the ASCII characters (1-2) and a 9.

additional data identifier

beginning of the additional data section.

the ASCII character set.

reoccurring groups.

#### AIRCRAFT-TURBULENCE-OBSERVATION

The code that denotes the rate of

DOM: A specific domain comprised of

- 1 = Infrequent
- 2 = Frequent
- 3 = Occasional
- 4 = Intermittent
- 5 = Continuous
- 9 = Missing

POS: 78-78

#### AIRCRAFT-TURBULENCE-OBSERVATION

The code that denotes the intensity of

DOM: A specific domain comprised of

- 0 = None
- 1 = Light
- 2 = Light to Moderate
- 3 = Moderate
- 4 = Moderate to Severe
- 5 = Severe
- 6 = Severe to Extreme
- 7 = Extreme
- 9 = Missing

POS: 79-79

#### AIRCRAFT-TURBULENCE-OBSERVATION type

The code that denotes the type of

DOM: A specific domain comprised of

- 1 = In cloud
- 2 = Clear Air Turbulence
- 9 = Missing

FLD LEN 3

#### GEOPHYSICAL-POINT-OBSERVATION

The identifier that denotes the

DOM: A specific domain comprised of

ADD = Additional Data Section

The fields following may be part of

FLD LEN: 3

FLIGHT-WEATHER identifier

availability of flight weather data.  
once per observation.

the following qualitative data value:

Additional Data and includes the following fields:

contrail persistence code

cloud condition code

horizontal visibility code

present weather code

present weather

significant weather change code

significant weather distance code

off course weather code

off course weather bearing code

contrail persistence code

of a contrail.

the ASCII characters (0-2) and a 9.

this group are present)

cloud condition code

cloud conditions at flight level.

the ASCII characters (0-9).

okta

okta, with either 1 to 4 oktas above or below,

above and 0 to 4 oktas below

and more than 4 oktas below

The identifier that denotes the

This data group may appear 0 or

DOM: A specific domain comprised of

AW1 = In-Flight and Off-Course

FLIGHT-WEATHER-CONDITION-OBSERVATION

FLIGHT-WEATHER-CONDITION-OBSERVATION

FLIGHT-WEATHER-CONDITION-OBSERVATION

FLIGHT-WEATHER-CONDITION-OBSERVATION

FLIGHT-WEATHER-CONDITION-OBSERVATION

precipitation code

FLIGHT-WEATHER-CONDITION-OBSERVATION

FLIGHT-WEATHER-CONDITION-OBSERVATION

FLIGHT-WEATHER-CONDITION-OBSERVATION

FLIGHT-WEATHER-CONDITION-OBSERVATION

FLD LEN: 1

FLIGHT-WEATHER-CONDITION-OBSERVATION

The code that denotes the persistence

DOM: A specific domain comprised of

0 = None

1 = Not persistent

2 = Persistent

9 = Missing (only if other fields in

FLD LEN: 2

FLIGHT-WEATHER-CONDITION-OBSERVATION

The code that denotes the general

DOM: A specific domain comprised of

00 = Total cloud amount less than 1

01 = Total cloud amount of at least 1

02 = Cloud amount more than 4 oktas

03 = Cloud amount 0 to 4 oktas above

above and below  
layers)  
instruments 25% of time  
instruments 50% of time  
instruments 75% of time  
continuous instrument flight

meters)  
meters)  
meters)  
3000 meters)  
meters)  
meters)

this group are present)

horizontal visibility code  
visibility range at flight level.  
the ASCII character (1-3) and a 9.

this group are present)

present weather code  
phenomena occurring at flight level.  
the ASCII characters (0-9).

broken cloud amounts)  
clouds

- 04 = Cloud amount of more than 4 oktas
- 05 = Chaotic sky (many undefined
- 06 = In and out of clouds, on
- 07 = In and out of clouds, on
- 08 = In and out of clouds, on
- 09 = In clouds all of the time,
- 10 = Clear
- 11 = Above clouds (tops less than 3000
- 12 = Above clouds (tops 3000 - 5500
- 13 = Above clouds (tops above 5500
- 14 = Below clouds (bases less than
- 15 = Below clouds (bases 3000 - 5500
- 16 = Below clouds (bases above 5500
- 17 = Between broken or overcast layers
- 18 = In clouds
- 19 = In and out of clouds
- 99 = Missing (only if other fields in

FLD LEN: 1  
FLIGHT-WEATHER-CONDITION-OBSERVATION

The code that denotes the horizontal

DOM: A specific domain comprised of

- 1 = Poor (less than 1.85 kilometers)
- 2 = Fair (1.85 to 5.5 kilometers)
- 3 = Good (greater than 5.5 kilometers)
- 9 = Missing (only if other fields in

FLD LEN: 2  
FLIGHT-WEATHER-CONDITION-OBSERVATION

The code that denotes the atmospheric

DOM: A specific domain comprised of

- 00 = Clear (at least at flight level)
- 01 = Partly cloudy (scattered or
- 02 = Continuous layer or layers of
- 03 = Sandstorm, duststorm

- 04 = Fog, thick dust or haze
- 05 = Drizzle
- 06 = Rain
- 07 = Snow or rain and snow mixed
- 08 = Showers
- 09 = Thunderstorms
- 10 = Lightning
- 11 = Scattered clouds
- 12 = Broken clouds
- 99 = Missing (only if other fields in

this group are present)

FLD LEN: 1  
 FLIGHT-WEATHER-CONDITION-OBSERVATION

present weather precipitation code

nature of precipitation occurring at flight level.

the ASCII characters (0-9).

The code that denotes the general

DOM: A specific domain comprised of

- 0 = Light intermittent
- 1 = Light continuous
- 2 = Moderate intermittent
- 3 = Moderate continuous
- 4 = Heavy intermittent
- 5 = Heavy continuous
- 6 = With rain
- 7 = With snow
- 8 = With hail
- 9 = Missing (only if other fields in

this group are present)

FLD LEN: 2  
 FLIGHT-WEATHER-CONDITION-OBSERVATION

significant weather change code

change in the weather observed from an aircraft in-flight.

the ASCII characters (0-9).

The code that denotes a significant

DOM: A specific domain comprised of

- 00 = No change
- 01 = Marked wind shift
- 02 = Beginning or ending of marked
- 03 = Marked temperature change (not
- 04 = Precipitation begins or ends
- 05 = Change in cloud forms
- 06 = Fog or ice fog bank begins or
- 07 = Warm front
- 08 = Cold front
- 09 = Front, type not specified
- 99 = Missing (only if other fields in

turbulence

with altitude)

ends

this group are present)

FLD LEN: 2  
 FLIGHT-WEATHER-CONDITION-OBSERVATION

significant weather distance code

an aircraft relative to an observation of a significant change in the weather.  
DOM: A specific domain comprised of the ASCII characters (1-9).

- 01 = Previous position
- 02 = Present position
- 03 = 30 nautical miles
- 04 = 60 nautical miles
- 05 = 90 nautical miles
- 06 = 120 nautical miles
- 07 = 150 nautical miles
- 08 = 180 nautical miles
- 09 = Greater than 180 nautical miles
- 10 = Unknown
- 99 = Missing (only if other fields in

this group are present)

FLD LEN: 2  
FLIGHT-WEATHER-CONDITION-OBSERVATION

off-course weather code

off-course weather occurrence viewable from an aircraft in-flight.

DOM: A specific domain comprised of the ASCII characters (1-9).

- 01 = Signs of tropical cyclone
- 02 = Ugly, threatening sky
- 03 = Duststorm or sandstorm
- 04 = Fog or ice fog
- 05 = Waterspout
- 06 = Cirrostratus layer or bank
- 07 = Altostratus or altocumulus layer
- 08 = Line of heavy cumulus or towering
- 09 = Cumulonimbus heads or
- 99 = Missing (only if other fields in

or bank

cumulus

thunderstorms

this group are present)

FLD LEN: 2  
FLIGHT-WEATHER-CONDITION-OBSERVATION

off course weather bearing code

The code that denotes the direction of a significant weather occurrence viewable from an aircraft in-flight.

DOM: A specific domain comprised of the ASCII characters (1-9).

- 01 = Northeast
- 02 = East
- 03 = Southeast
- 04 = South
- 05 = Southwest
- 06 = West
- 07 = Northwest
- 08 = North

this group are present)

09 = All directions  
99 = Missing (only if other fields in

may be repeated.

FLD LEN: 3  
SKY-COVER-LAYER identifier  
Indicates cloud data. This data group

the following qualitative data value:

DOM: A specific domain comprised of

values:

GA1 = first layer  
GA2 = second layer  
GA3 = third layer  
GA4 = fourth layer  
Each layer contains the following

SKY-COVER-LAYER coverage code  
SKY-COVER-LAYER cloud type code  
SKY-COVER-LAYER base height dimension  
SKY-COVER-LAYER top height dimension

the total celestial dome covered by a SKY-COVER-LAYER.

FLD LEN: 2  
SKY-COVER-LAYER coverage code  
The code that denotes the fraction of

the characters in the ASCII character set.

DOM: A specific domain comprised of

or less, but not 0

00 = None, SKC or CLR  
01 = One okta or less, but not 0, 1/10  
02 = Two oktas, 2/10 - 3/10 or FEW  
03 = Three oktas, 4/10  
04 = Four oktas, 5/10 or SCT  
05 = Five oktas, 6/10  
06 = Six oktas, 7/10 - 8/10  
07 = Seven oktas - 9/10 or more but

not 10/10, or BKN

08 = Eight oktas, 10/10 or OVC  
09 = Sky obscured, or cloud amount

cannot be estimated

10 = Partial obscuration  
99 = Missing (only if other fields in

this group are present)

classification of the clouds that comprise a SKY-COVER-LAYER.

FLD LEN: 2  
SKY-COVER-LAYER cloud type code  
The code that denotes the  
DOM: A specific domain comprised of

the characters in the ASCII character set.

00 = Cirrus (CI)  
01 = Cirrocumulus (CC)  
02 = Cirrostratus (CS)  
03 = Altocumulus (AC)  
04 = Altostratus (AS)  
05 = Nimbostratus (NS)

06 = Stratocumulus (SC)  
07 = Stratus (ST)  
08 = Cumulus (CU)  
09 = Cumulonimbus (CB)  
10 = Cloud not visible owing to

darkness, fog, duststorm, sandstorm, or other analogous

phenomena (only if other fields

in this group are present)

99 = Missing

FLD LEN: 6

SKY-COVER-LAYER base height dimension  
The height relative to a VERTICAL-

REFERENCE-DATUM of the lowest surface of a cloud.

This attribute can equal +99999 =

missing only if other fields in this group are present.

MIN: -00400 MAX: +35000

UNITS: Meters

FLD LEN: 6

SKY-COVER-LAYER top height

dimension

The height relative to a  
of a cloud.

VERTICAL-REFERENCE-DATUM of the highest surface

Comment Text: In general, land

surface stations use above ground level

(AGL) for vertical reference;

aircraft and ships use Mean Sea Level (MSL)

as vertical reference datum.

This attribute can equal +99999 = missing

only if other fields in this

group are present

MIN: -00400 MAX: +35000

UNITS: Meters

FLD LEN: 3

ICING-ADDITIONAL-DATA identifier

The identifier that denotes the

availability of icing data.

This data group may appear 0 or

once per observation.

DOM: A specific domain comprised of

the following qualitative data value:

JAL = Icing Additional Data and

included the following fields:

AIRCRAFT-ICING-OBSERVATION closest

code

AIRCRAFT-ICING-OBSERVATION farthest

code

AIRCRAFT-ICING-OBSERVATION intensity

code

AIRCRAFT-ICING-OBSERVATION type code

AIRCRAFT-ICING-OBSERVATION base height

dimension

AIRCRAFT-ICING-OBSERVATION top height

dimension

code  
aircraft in its flight path at the time of the report relative to the closest point of icing occurrence.  
the ASCII characters (0-9).

FLD LEN: 2  
AIRCRAFT-ICING-OBSERVATION closest

The code that denotes position of an aircraft in its flight path at the time of the report relative to the closest point of icing occurrence.  
DOM: A specific domain comprised of

- 00 = Ascent or Descent
- 01 = Previous position
- 02 = Present position
- 03 = 30 nautical miles
- 04 = 60 nautical miles
- 05 = 90 nautical miles
- 06 = 120 nautical miles
- 07 = 150 nautical miles
- 08 = 180 nautical miles
- 09 = Greater than 180 nautical miles
- 10 = Unknown
- 99 = Missing (only if other fields in

this group are present)

code  
aircraft in its flight path at the time of the report relative to the farthest point of icing occurrence.  
the ASCII characters (0-9).

FLD LEN: 2  
AIRCRAFT-ICING-OBSERVATION farthest

The code that denotes position of an aircraft in its flight path at the time of the report relative to the farthest point of icing occurrence.

DOM: A specific domain comprised of

- 00 = Ascent or Descent
- 01 = Previous position
- 02 = Present position
- 03 = 30 nautical miles
- 04 = 60 nautical miles
- 05 = 90 nautical miles
- 06 = 120 nautical miles
- 07 = 150 nautical miles
- 08 = 180 nautical miles
- 09 = Greater than 180 nautical miles
- 10 = Unknown
- 99 = Missing (only if other fields in

this group are present)

code  
icing on the surface of an AIRCRAFT.  
the ASCII characters (0-5) and a 9.

FLD LEN: 1  
AIRCRAFT-ICING-OBSERVATION intensity

The code that denotes the intensity of

DOM: A specific domain comprised of

- 0 = None
- 1 = Light
- 2 = Moderate
- 3 = Heavy (or severe)
- 4 = Trace

this group are present)

5 = Unknown  
9 = Missing (only if other fields in

accumulating on the surface of an aircraft.  
the ASCII characters (1-7) and a 9.

FLD LEN: 1  
AIRCRAFT-ICING-OBSERVATION type code  
The code that denotes the type of ice  
DOM: A specific domain comprised of  
1 = Rime ice in cloud  
2 = Clear ice in cloud  
3 = Combination rime and clear ice in  
4 = Rime ice in precipitation  
5 = Clear ice in precipitation  
6 = Combination of rime and clear ice  
7 = Frost (icing in clear air)  
9 = Missing (only if other fields in

cloud

in precipitation

this group are present)

dimension  
(MSL), of the lower surface of the icing layer.  
missing only if other fields in this group are present.  
UNITS: Meters

FLD LEN: 6  
AIRCRAFT-ICING-OBSERVATION base height  
The height, relative to Mean Sea Level  
This attribute can equal +99999 =  
MIN: -00400 MAX: 99998

dimension  
(MSL), of the upper surface of the icing layer.  
missing only if other fields in this group are present.  
UNITS: Meters

FLD LEN: 6  
AIRCRAFT-ICING-OBSERVATION top height  
The height, relative to Mean Sea Level  
This attribute can equal +99999 =  
MIN: -00400 MAX: 99998

availability of sea level pressure data.  
per observation.  
the following qualitative data value:  
includes the following field:  
level pressure rate

FLD LEN: 3  
SEA-LEVEL-PRESSURE data identifier  
The identifier that denotes the  
This data group may appear 0 or once  
DOM: A specific domain comprised of  
MA1 = Sea Level Pressure Data and  
ATMOSPHERIC-PRESSURE-OBSERVATION sea

FLD LEN: 5

level pressure rate  
Level (MSL).  
UNITS: Hectopascals

availability of a surface wind report.  
once per observation.  
the following qualitative data value:  
includes the following fields:

direction, between true north and the direction from which  
the wind is blowing.  
This attribute can equal 999 =  
missing only if other fields in this group are present.  
UNITS: Angular degrees

the WIND-OBSERVATION.  
ASCII characters and a 9.

this group are present)

air past a fixed point. This attribute can equal 9999 =  
group are present.  
UNITS: Meters per second

ATMOSPHERIC-PRESSURE-OBSERVATION sea  
The air pressure relative to Mean Sea  
MIN: 08300 MAX: 10900

SCALING FACTOR: 10  
FLD LEN: 3  
SURFACE WIND data identifier  
The identifier that denotes the

This data group may appear 0 or  
DOM: A specific domain comprised of  
OC1 = Sea Surface Additional Data and  
WIND-OBSERVATION direction angle  
WIND-OBSERVATION type code  
WIND-OBSERVATION speed rate

FLD LEN: 3  
WIND-OBSERVATION direction angle  
The angle, measured in a clockwise  
the wind is blowing.  
This attribute can equal 999 =  
MIN: 001 MAX: 360

FLD LEN: 1  
WIND-OBSERVATION type code  
The code that denotes the character of  
DOM: A specific domain comprised of

N = Normal  
V = Variable wind  
C = Calm wind  
Q = Squall  
9 = Missing (only if other fields in

FLD LEN: 4  
WIND-OBSERVATION speed rate  
The rate of the horizontal travel of  
missing only if other fields in this  
MIN: 0000 MAX: 2000

SCALING FACTOR: 10  
FLD LEN: 3  
RADAR data identifier

availability of radar data.

once per observation.

the following qualitative data value:

includes the following fields:

OBSERVATION bearing angle

OBSERVATION echo character code

OBSERVATION echo intensity code

OBSERVATION echo intensity trend

OBSERVATION echo ellipse orientation

OBSERVATION echo distance dimension

OBSERVATION echo ellipse width

OBSERVATION echo ellipse length

OBSERVATION bearing angle

direction, between true north and the echo center.

missing only if other fields in this group are present.

UNITS: Angular degrees

OBSERVATION echo character code

character of the meteorological target of

the ASCII characters (1-6) and a 9.

this group are present)

The identifier that denotes the

This data group may appear 0 or

DOM: A specific domain comprised of

RA1 = Radar Additional Data and

AIRCRAFT-METEOROLOGICAL-RADAR-

AIRCRAFT-METEOROLOGICAL-RADAR-

AIRCRAFT-METEOROLOGICAL-RADAR-

AIRCRAFT-METEOROLOGICAL-RADAR-

code

AIRCRAFT-METEOROLOGICAL-RADAR-

code

AIRCRAFT-METEOROLOGICAL-RADAR-

AIRCRAFT-METEOROLOGICAL-RADAR-

dimension

AIRCRAFT-METEOROLOGICAL-RADAR-

dimension

FLD LEN: 3

AIRCRAFT-METEOROLOGICAL-RADAR-

The angle, measured in a clockwise

This attribute can equal 999 =

MIN: 001 MAX: 360

FLD LEN: 1

AIRCRAFT-METEOROLOGICAL-RADAR-

The code that denotes the general echo interest.

DOM: A specific domain comprised of

1 = Scattered area

2 = Solid area

3 = Scattered line

4 = Solid line

5 = Scattered, all quadrants

6 = Solid, all quadrants

9 = Missing (only if other fields in

FLD LEN: 1

OBSERVATION echo intensity code  
strength of the echo.  
the ASCII characters (1-3) and a 9.

this group are present)

OBSERVATION echo intensity trend code  
strength of the echo.  
the ASCII characters (1-3) and a 9.

this group are present)

OBSERVATION echo ellipse orientation code  
orientation of the major axis of the ellipse.  
the ASCII characters (1-9).  
determined

this group are present)

OBSERVATION echo distance dimension  
center to the aircraft.  
missing only if other fields in this group are present.  
UNITS: Kilometers

AIRCRAFT-METEOROLOGICAL-RADAR-

The code that denotes the current

DOM: A specific domain comprised of

- 1 = Weak
- 2 = Moderate
- 3 = Strong
- 9 = Missing (only if other fields in

FLD LEN: 1

AIRCRAFT-METEOROLOGICAL-RADAR-

The code that denotes the trend of the

DOM: A specific domain comprised of

- 1 = Decreasing
- 2 = No change
- 3 = Increasing
- 9 = Missing (only if other fields in

FLD LEN: 1

AIRCRAFT-METEOROLOGICAL-RADAR-

The code that denotes the directional  
orientation of the major axis of the ellipse.

DOM: A specific domain comprised of

- 0 = Circular-No major axis can be
- 1 = North-northeast to south-southwest
- 2 = Northeast to southwest
- 3 = East-northeast to west-southwest
- 4 = East to west
- 5 = East-southeast to west-northwest
- 6 = Southeast to northwest
- 7 = South-southeast to north-northwest
- 8 = South to north
- 9 = Missing (only if other fields in

FLD LEN: 3

AIRCRAFT-METEOROLOGICAL-RADAR-

The linear measurement from the echo

This attribute can equal 999 =

MIN: 000 MAX: 300

FLD LEN: 3

OBSERVATION echo ellipse width dimension  
axis of the ellipse.  
missing only if other fields in this group are present.  
UNITS: kilometers

AIRCRAFT-METEOROLOGICAL-RADAR-  
The linear measurement of the minor  
This attribute can equal 999 =  
MIN: 000 MAX: 300

OBSERVATION echo ellipse length dimension  
axis of the ellipse.  
missing only if other fields in this group are present.  
UNITS: Kilometers

FLD LEN: 3  
AIRCRAFT-METEOROLOGICAL-RADAR-  
The linear measurement of the major  
This attribute can equal 999 =  
MIN: 000 MAX: 300

identifier  
availability of sea surface temperature data.  
per observation.  
the following qualitative data value:  
Data and includes the following field:  
temperature

FLD LEN: 3  
SEA-SURFACE-TEMPERATURE data  
The identifier that denotes the  
This data group may appear 0 or once  
DOM: A specific domain comprised of  
SA1 = RECCO Sea Surface Temperature  
SEA-SURFACE-TEMPERATURE-OBSERVATION

temperature  
surface.  
UNITS: Degrees Celsius

FLD LEN: 4  
SEA-SURFACE-TEMPERATURE-OBSERVATION  
The temperature of the water at the  
MIN: -050 MAX: +450  
SCALING FACTOR: 10

identifier  
beginning of the remarks data section.  
the ASCII character set.  
text  
OBSERVATION remark.

FLD LEN 3  
GEOPHYSICAL-POINT-OBSERVATION remarks  
The identifier that denotes the  
DOM: A specific domain comprised of  
REM = remarks  
FLD LEN: max 250  
GEOPHYSICAL-POINT-OBSERVATION remark  
The text of a GEOPHYSICAL-POINT-  
Remarks cannot equal 9's = missing.

Entity\_Type\_Definition\_Source: AFCCC

Distribution\_Information:

Distributor:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization: AFCCC/DOO

Contact\_Address:

Address\_Type: Mailing and Physical

Address: 151 Patton Avenue, Room 120

City: Asheville

State\_or\_Province: NC

Postal\_Code: 28801-5002

Country: USA

Contact\_Voice\_Telephone: (828) 271-4291

Contact\_Voice\_Telephone: DSN 673-9004

Contact\_Facsimile\_Telephone: (828) 271-4334

Contact\_Facsimile\_Telephone: DSN 673-9024

Contact\_Electronic\_Mail\_Address: doo\_all@afccc.af.mil

Hours\_of\_Service: 0730-1630 Eastern Time M-F

Resource\_Description: Aircraft Observation Database

Distribution\_Liability: The data represents the results of data collection/processing for a specific U.S. Air Force activity and indicates the general existing conditions. As such, it is only valid for its intended use, content, time, and accuracy specifications. The user is responsible for the results of any application of the data for other than its intended purpose.

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Metadata\_Reference\_Information:

Metadata\_Date: 20070120

Metadata\_Review\_Date: 20070120

Metadata\_Future\_Review\_Date: 20080120

Metadata\_Contact:

Contact\_Information:

Contact\_Organization\_Primary:

Contact\_Organization: AFCCC/DOD

Contact\_Address:

Address\_Type: Mailing and physical.

Address: 151 Patton Avenue Room 120

City: Asheville

State\_or\_Province: NC

Postal\_Code: 28801-5002

Country: USA

Contact\_Voice\_Telephone: (828) 271-4299

Contact\_Voice\_Telephone: DSN 673-9006

Contact\_Facsimile\_Telephone: (828) 271-4334

Contact\_Facsimile\_Telephone: DSN 673-9024

Contact\_Electronic\_Mail\_Address: dod@afccc.af.mil

Hours\_of\_Service: 0730-1630 EST M-F

Metadata\_Standard\_Name: FGDC-Content Standards for Digital Geospatial

Metadata.

Metadata\_Standard\_Version: FGDC-STD-001-1998

Metadata\_Time\_Convention: Universal Time

Metadata\_Access\_Constraints: None

Metadata\_Use\_Constraints: None

Metadata\_Security\_Information:

Metadata\_Security\_Classification\_System: DoD

Metadata\_Security\_Classification: Unclassified

Metadata\_Security\_Handling\_Description: None