

Identification_Information:

Citation:

Citation_Information:

Originator: Kennedy Space Center / Cape Canaveral, Florida
Publication_Date: 20061016
Title: Weather Information Network & Display System (WINDS)
Geospatial_Data_Presentation_Form: Map
Publication_Information :
Publication_Place : Asheville, NC
Publisher : Air Force Combat Climatology Center

Description:

Abstract: This database contains meteorological data provided by the mesoscale Weather Information Network Display System (WINDS) at the Kennedy Space Center/ Cape Canaveral Complex. Meteorological instruments at various levels on towers record a variety of parameters continuously. Towers reach a height of approximately 500 feet. Processors at the sites derive 5 minute statistics from the continuous monitoring of the environment. Elements include: temperature, dew point temperature, wind speed and wind direction.

Purpose: Support DoD projects.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 19860101

Ending_Date: Present

Currentness_Reference: From the data

Status:

Progress: In work

Maintenance_and_Update_Frequency: Monthly

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -081.0706700000

East_Bounding_Coordinate: -80.5320000000

North_Bounding_Coordinate: 28.7875000000

South_Bounding_Coordinate: 28.3296700000

Keywords:

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: Weather Station Mesonet

Theme_Keyword: Weather Reporting Location

Place:

Place_Keyword_Thesaurus: None

Place_Keyword: Kennedy Space Center

Stratum:

Stratum_Keyword_Thesaurus: None

Stratum_Keyword: Surface

Temporal:

Temporal_Keyword_Thesaurus: None

Temporal_Keyword: 5 minutes

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

Data_Set_Credit: Collected by Kennedy Space Center / Cape Canaveral Complex Data Center, Arizona State University, and Carbon Dioxide Information Analysis Center at the Oak Ridge National Laboratory.

Security_Information:

Security_Classification_System: DoD

Security_Classification: Unclassified

Security_Handling_Description: None

Data_Quality_Information:

Logical_Consistency_Report: Topological checks (clean and build) are applied to the data before they are loaded into the AFCCC Oracle tables. Quality checks (QC) are applied after the data are loaded into Oracle tables. These checks are performed as part of a routine that is used to parse the original data obtained from Patrick, make it compliant with Joint METOC standards for units and decimals and prepare it for the SQL loader. This routine applies gross limit checks to the data based on sensor limits provided in the "Interface Design Specification Weather Information Network Display System for the Det 11, 2 WS/USAFETAC-OL_A Data Set" dated 23 March 1998 and the "Eastern Range Instrumentation Handbook: Weather Information Network Display System" for Cape Canaveral Air Force Station (CCAFS) of July 2003. Specifically, the routine eliminates any time stamp that does not contain data and any data that does not fall within the specific sensor limits: wind direction 0 to 360 degrees, wind speed 0 to 80 m/s, air temperature 30 to 70°C, relative humidity 0 to 100%, and pressure 800 to 1060 mb. The tower elevations come from Patrick in feet and AFCCC converts them to meters before they are loaded into the tables. The elevation data are however, rounded to the nearest one hundredth of a meter. After the topological checks are performed, the data are inserted into a temporary Oracle table called "Tower_Stage" where more quality checks are run on the data before it is moved to the final destination table called "Tower_Ob". While the data are in the Tower_Stage table, another set of quality checks are conducted that essentially rechecks all the elements that were checked by the topological routine and ensures that all tower numbers in the data are consistent with the list of towers contained in the Station_Tower table. Erroneous characters such as asterisks (*), exclamation points (!) and others that do not belong in the data are removed by AFCCC before the data are loaded into the database. Additional quality checks are performed on the data after they are loaded into Oracle tables. The temperature and wind values are checked against the climatological extremes for the station. Temperatures found to be above or below the monthly extremes for the station are assigned a quality flag of two (2) indicating suspect data. Temperatures that are 5

degrees Fahrenheit or more above or below the monthly extremes for the station are assigned a quality flag of three (3) and removed from the database. Wind speeds that exceed the monthly extreme for the station are also assigned a quality flag of two (2) indicating suspect data. No wind speed values are removed from the database.

Completeness_Report: Periods of records vary from tower to tower. No reasonable data are excluded from this data during the load process. The Oracle tables are set up to include all the data that are sent in from the field. Test Range (test_range) and Tower Identification (twr_id) columns have been added to the tables to allow AFCCC to mix Patrick tower data and Vandenberg tower data in the same table. For the Patrick data, a "p" is placed in the test_range column of the table to signify "Patrick". The tower_id column is used to indicate the direction (if any) assigned a sensor on a specific tower (i.e., "NE" for Northeast, "SW" for Southwest, etc.). If no specific direction is included in the original data for a given tower, "ND" for "No Direction" is entered into the twr_id column.

Lineage:

Source_Information:

Source_Citation:

Citation_Information:

Originator: Kennedy Space Center / Cape Canaveral Complex

Publication_Date: Unknown

Title: Weather Information Network & Display System (WINDS)

Geospatial_Data_Presentation_Form: map

Publication_Information:

Publication_Place: Kennedy Space Center / Cape Canaveral, FL

Publisher: 45th Weather Squadron (formerly Det 11, 2 WS, Patrick AFB,

FL)

Type_of_Source_Media: CD-ROM

Source_Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 19860101

Beginning_Time: 0000Z

Ending_Date: Present

Ending_Time: Unknown

Source_Currentness_Reference: 19860101

Source_Citation_Abbreviation: WINDS

Source_Contribution: AFCCC created and maintains the dataset.

Process_Step:

Process_Description: The data arrives at AFCCC from Patrick AFB on a CD-ROM. A program is used to take the raw data, remove any inconsistencies in the data and run some gross limit checks. Following these initial checks, the data is loaded into Oracle tables where more elaborate quality checks are run. 45th Weather Squadron (formerly Det 11, 2 WS, Patrick AFB, FL) collects data from towers in the Cape Canaveral area and then sends the data to AFCCC in Asheville, NC for processing and storage.

Process_Date: 19950815

Entity_and_Attribute_Information:

Detailed_Description:

Entity_Type:

Entity_Type_Label: STATION_TOWER

Entity_Type_Definition: This is an Oracle database. Described are two tables: one containing station tower location information and one that contains the tower observation information. Each table is listed as an entity with the associated attributes shown.

Entity_Type_Definition_Source: AFCCC

Attribute:

Attribute_Label: TEST_RANGE

Attribute_Definition: locally derived character to identify test range, VARCHAR (1)

Attribute_Definition_Source: AFCCC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: p

Enumerated_Domain_Value_Definition: Patrick AFB, Florida

Enumerated_Domain_Value_Definition_Source: Patrick AFB, Florida

Beginning_Date_of_Attribute_Values: 19860101

Attribute_Measurement_Frequency: 5 minutes

Attribute:

Attribute_Label: TWR_NO

Attribute_Definition: Distinctive four digit identification number given to each tower,

NUMBER (4)

Attribute_Definition_Source: AFCCC

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0001

Range_Domain_Maximum: 9999

Attribute_Units_of_Measure: each

Beginning_Date_of_Attribute_Values: 19860101 (109)

Attribute_Measurement_Frequency: 5 minutes

Attribute:

Attribute_Label: TWR_ID

Attribute_Definition: Direction indicator for sensor

Attribute_Definition_Source: AFCCC

Attribute_Domain_Values:

Unrepresentable_Domain: Composed of ASCII (6) characters

Beginning_Date_of_Attribute_Values: 19860101

Attribute_Measurement_Frequency: 5 minutes

Attribute:

Attribute_Label: LOCATION

Attribute_Definition: physical description of tower location
Attribute_Definition_Source: AFCCC
Attribute_Domain_Values:
 Unrepresentable_Domain: Composed of ASCII (12) characters
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes

Attribute:

Attribute_Label: AREA
Attribute_Definition: a general area description of a tower location
Attribute_Definition_Source: AFCCC
Attribute_Domain_Values:
 Unrepresentable_Domain: Composed of ASCII (11) characters
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes

Attribute:

Attribute_Label: SENSOR_CNT
Attribute_Definition: Number of sensors on a tower, (2)
Attribute_Definition_Source: AFCCC
Attribute_Domain_Values:
 Range_Domain:
 Range_Domain_Minimum: 00
 Range_Domain_Maximum: 99
 Attribute_Units_of_Measure: each
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes

Attribute:

Attribute_Label: LAT
Attribute_Definition: The latitude coordinate of a geophysical-point-observation, NUMBER

(11,7)

Attribute_Definition_Source: Joint METOC Conceptual Data Model
Attribute_Domain_Values:
 Range_Domain:
 Range_Domain_Minimum: 90.0000000
 Range_Domain_Maximum: -90.0000000
 Attribute_Units_of_Measure: degrees
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes

Attribute:

Attribute_Label: LON
Attribute_Definition: The longitude coordinate of a geophysical-point-observation, NUMBER

(12,7)

Attribute_Definition_Source: Joint METOC Conceptual Data Model

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: -180.0000000

Range_Domain_Maximum: 180.0000000

Attribute_Units_of_Measure: degrees

Beginning_Date_of_Attribute_Values: 19860101

Attribute_Measurement_Frequency: 5 minutes

Attribute:

Attribute_Label: ELEV

Attribute_Definition: The height above ground level of the instrument, NUMBER (5,2)

Attribute_Definition_Source: AFCCC

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0.00

Range_Domain_Maximum: 999.99

Attribute_Units_of_Measure: meters

Beginning_Date_of_Attribute_Values: 19860101

Attribute_Measurement_Frequency: 5 minutes

Detailed_Description:

Entity_Type:

Entity_Type_Label: TOWER_OB (182)

Entity_Type_Definition: Source of data

Entity_Type_Definition_Source: AFCCC

Attribute:

Attribute_Label: TEST_RANGE

Attribute_Definition: locally derived character to identify test range, VARCHAR (1)

Attribute_Definition_Source: AFCCC

Attribute_Domain_Values:

Enumerated_Domain:

Enumerated_Domain_Value: p

Enumerated_Domain_Value_Definition: Patrick AFB, Florida

Enumerated_Domain_Value_Definition_Source: Patrick AFB, Florida

Beginning_Date_of_Attribute_Values: 19860101

Attribute_Measurement_Frequency: 5 minutes

Attribute:

Attribute_Label: TWR_NO

Attribute_Definition: Distinctive four digit identification number given to each tower,

NUMBER (4)

Attribute_Definition_Source: AFCCC

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0001

Range_Domain_Maximum: 9999
Attribute_Units_of_Measure: each
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes

Attribute:
Attribute_Label: TWR_ID
Attribute_Definition: Direction indicator for sensor
Attribute_Definition_Source: AFCCC
Attribute_Domain_Values:
Unrepresentable_Domain: Composed of ASCII characters, CHAR (6)
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes

Attribute:
Attribute_Label: DATETIME
Attribute_Definition: Datetime of observation rounded to the nearest minute (217)
Attribute_Definition_Source: AFCCC
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 19860101000000
Range_Domain_Maximum: Current
Attribute_Units_of_Measure: month,day,year,hour,min
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes

Attribute:
Attribute_Label: LVL_ID
Attribute_Definition: elevation of sensor in meters, NUMBER (5,2)
Attribute_Definition_Source: AFCCC
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 00.00
Range_Domain_Maximum: 99.99
Attribute_Units_of_Measure: meters
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes

Attribute:
Attribute_Label: WIND_DIR_MN
Attribute_Definition: The average angle, measured in a clockwise direction, between true north and the direction from which winds for the reporting period are blowing, NUMBER (3)
Attribute_Definition_Source: Joint METOC Conceptual Data Model
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 000

Range_Domain_Maximum: 360
Attribute_Units_of_Measure: degrees
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes
Attribute:
Attribute_Label: WND_SPD_MN
Attribute_Definition: The average of the sampled wind speeds measured in a reporting
period, NUMBER (5,1)
Attribute_Definition_Source: Joint METOC Conceptual Data Model
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 000.0
Range_Domain_Maximum: 999.9
Attribute_Units_of_Measure: meters per second
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes
Attribute:
Attribute_Label: WIND_SPD_MAX
Attribute_Definition: The maximum of the sampled wind speeds measured in a reporting
period, NUMBER (5,1)
Attribute_Definition_Source: Joint METOC Conceptual Data Model
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 000.0
Range_Domain_Maximum: 999.9
Attribute_Units_of_Measure: meters per second
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes
Attribute:
Attribute_Label: WIND_SPD_SDEV
Attribute_Definition: The standard deviation of the wind speed measurements over a
reporting period, NUMBER (5,2)
Attribute_Definition_Source: Joint METOC Conceptual Data Model
Attribute_Domain_Values:
Range_Domain:
Range_Domain_Minimum: 00.00
Range_Domain_Maximum: 99.99
Attribute_Units_of_Measure: meters per second
Beginning_Date_of_Attribute_Values: 19860101
Attribute_Measurement_Frequency: 5 minutes
Attribute:
Attribute_Label: TEMP_AIR_MN

Attribute_Definition: mean temperature calculated from all one second data samples in the last five minute period, NUMBER (6,1)

Attribute_Definition_Source: Joint METOC Conceptual Data Model

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0000.0

Range_Domain_Maximum: 9999.9

Attribute_Units_of_Measure: Celsius

Beginning_Date_of_Attribute_Values: 19860101

Attribute_Measurement_Frequency: 5 minutes

Attribute:

Attribute_Label: TEMP_DEWPT_MN

Attribute_Definition: mean dew point calculated from all one second data samples in the last five minute period, NUMBER (6,1)

Attribute_Definition_Source: Joint METOC Conceptual Data Model

Attribute_Domain_Values:

Range_Domain:

Range_Domain_Minimum: 0000.0

Range_Domain_Maximum: 9999.9

Attribute_Units_of_Measure: Celsius

Beginning_Date_of_Attribute_Values: 19860101

Attribute_Measurement_Frequency: 5 minutes

Overview_Description:

Entity_and_Attribute_Overview: None

Entity_and_Attribute_Detail_Citation: None

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: Patrick WINDS Towers 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.

Custom_Order_Process: Order by tower number. Order through the above distribution contact or this web site: https://www2.afccc.af.mil/forms_mil/html/restricted/sarform.html

Metadata_Reference_Information:

Metadata_Date: 19950815
Metadata_Review_Date: 20070118
Metadata_Future_Review_Date: 20080118
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