

Integrated Surface Data - “Lite” Format Documentation

June 20, 2006

Introduction

The ISD-Lite data contain a fixed-width formatted subset of the complete Integrated Surface Data (ISD) for a select number of observational elements. The data are typically stored in a single file corresponding to the ISD data, i.e. one file per station per year. For more information on the ISD-Lite format, consult the ISD-Lite technical document.

Data Format

Field 1: Pos 1-4, Length 4: Observation Year

Year of observation, rounded to nearest whole hour

Field 2: Pos 6-7, Length 2: Observation Month

Month of observation, rounded to nearest whole hour

Field 3: Pos 9-11, Length 2: Observation Day

Day of observation, rounded to nearest whole hour

Field 4: Pos 12-13, Length 2: Observation Hour

Hour of observation, rounded to nearest whole hour

Field 5: Pos 14-19, Length 6: Air Temperature

The temperature of the air

UNITS: Degrees Celsius

SCALING FACTOR: 10

MISSING VALUE: -9999

Field 6: Pos 20-24, Length 6: Dew Point Temperature

The temperature to which a given parcel of air must be cooled at constant pressure and water vapor content in order for saturation to occur.

UNITS: Degrees Celsius

SCALING FACTOR: 10

MISSING VALUE: -9999

Field 7: Pos 26-31, Length 6: Sea Level Pressure

The air pressure relative to Mean Sea Level (MSL).

UNITS: Hectopascals

SCALING FACTOR: 10

MISSING VALUE: -9999

Field 8: Pos 32-37, Length 6: Wind Direction

The angle, measured in a clockwise direction, between true north and the direction from which the wind is blowing.

UNITS: Angular Degrees

SCALING FACTOR: 1

MISSING VALUE: -9999

*NOTE: Wind direction for calm winds is coded as "0".

Field 9: Pos 38-43, Length 6: Wind Speed Rate

The rate of horizontal travel of air past a fixed point.

UNITS: meters per second

SCALING FACTOR: 10

MISSING VALUE: -9999

Field 10: Pos 44-49, Length 6: Sky Condition Total Coverage Code

The code that denotes the fraction of the total celestial dome covered by clouds or other obscuring phenomena.

MISSING VALUE: -9999

DOMAIN:

- 0: None, SKC or CLR
- 1: One okta - 1/10 or less but not zero
- 2: Two oktas - 2/10 - 3/10, or FEW
- 3: Three oktas - 4/10
- 4: Four oktas - 5/10, or SCT
- 5: Five oktas - 6/10
- 6: Six oktas - 7/10 - 8/10
- 7: Seven oktas - 9/10 or more but not 10/10, or BKN
- 8: Eight oktas - 10/10, or OVC
- 9: Sky obscured, or cloud amount cannot be estimated
- 10: Partial obscuration
- 11: Thin scattered
- 12: Scattered
- 13: Dark scattered
- 14: Thin broken
- 15: Broken
- 16: Dark broken
- 17: Thin overcast
- 18: Overcast
- 19: Dark overcast

Field 11: Pos 50-55, Length 6: Liquid Precipitation Depth Dimension - One Hour Duration

The depth of liquid precipitation that is measured over a one hour accumulation period.

UNITS: millimeters

SCALING FACTOR: 10

MISSING VALUE: -9999

*NOTE: Trace precipitation is coded as "-1"

Field 12: Pos 56-61, Length 6: Liquid Precipitation Depth Dimension - Six Hour Duration

The depth of liquid precipitation that is measured over a six hour accumulation period.

UNITS: millimeters

SCALING FACTOR: 10

MISSING VALUE: -9999

*NOTE: Trace precipitation is coded as "-1"