

# METEOROLOGY

AWOS and LWIS

# Overview

01

## Two Types of Automated Weather System

Two types of automated weather stations are used for aviation purposes: the Automated Weather Observation System (AWOS) and the Limited Weather Information System (LWIS).

02

## AWOS

AWOS has a full suite of sensors that measures cloud base height, sky cover, visibility, temperature, dew point, wind velocity, altimeter setting, precipitation occurrence, type, amount and intensity, and icing.

03

## LWIS

LWIS is a more basic automated weather system, measuring only wind, altimeter setting, temperature and dew point.

04

## Voice Generation Module

Either system may be equipped with a voice generation module.

# AWOS and LWIS Performance Characteristics



## Reporting Thunderstorm On Site

TS – Thunderstorm (at site), if lightning detected at 6 SM or less.



## Reporting Thunderstorm in the Vicinity of a Site

VCTS –Thunderstorm in vicinity, if lightning detected from >6SM to 10 SM.



## Reporting Distance Lighting

LTNG DIST (direction) – If lightning detected from >10 SM to 30 SM.



## Unable to Report Freezing Drizzle and Drizzle

Freezing drizzle and drizzle are not reported. When drizzle is occurring, the AWOS will usually report either rain or unknown precipitation. When freezing drizzle is occurring, the AWOS will usually report freezing rain

# AWOS and LWIS Performance Characteristics



## Reporting Density Altitude

Density altitude is the altitude in ISA at which the air density would be equal to the air density at field elevation at the current temperature. This remark is only added when the density altitude, rounded to the nearest 100 feet, is 200 feet or higher than the aerodrome elevation.



## Reporting Ceilings

Ceilometer – AWOS is capable of reporting cloud bases up to 25,000 ft.



## Aviation Weather Cameras

Digital aviation weather cameras (WxCam) are installed at stand-alone locations as well as at many AWOS and LWIS sites.