

Description of CSC Weather Station

The weather station at CSC is a WRL-25-ZR model from Texas Weather Instruments which is no longer in business. Many thanks to David Patterson of TWI for his generous help in setting us up with this instrument. It is equipped with sensors to measure air and water temperature, air pressure, and wind speed and direction. Wind direction is assigned by the station to one of 16 values - that's why wind direction appears to be quantized into 22.5-degree increments.

A PC loads sensor readings from the weather station once per second using [Virtual Weather Station](#) (VWS) software from Ambient Software. VWS archives the data and, every five minutes, generates JPEG images of graphs and text derived from weather station sensor data. The PC then uploads this data via FTP to CSC's webserver. When you point your web browser to the CSC website weather links, the web server serves the latest JPEG images stored on the webserver into the webpage. This webpage is set to auto-update every five minutes, so you don't have to manually reload the page. This also means that the data you're looking at is never more than ten minutes old. All displayed data on the webpage comes from the weather station.

The 24-hour plot of wind direction shows large vertical swings when the wind changes direction slightly passing through North from just East of North to just West of North or vice versa. This big change in the graph is actually a small change in wind direction.

The compass-like display below this plot doesn't behave this way. The needle points into the wind as it was at the time of the last, or second-last, data upload to the webserver. The green dots show wind speed and direction over the last three hours, and give an idea of how variable the wind has been recently.

The two pie charts at the bottom provide another way of looking at the last three hours of wind speed and direction. Use them to see whether there has been a dominant speed and direction, e.g. mostly 4-8mph, out of the East but veering SE at times.

Data is also uploaded every minute or so to the [Weather Underground](#). Note: Weather Underground feed has been unreliable and is often down. CSC weather history is archived there, in easily-accessible graphs and tables. Note that wind gust information is not as accurate on Weather Underground as on this CSC Weather Station page, because it gets a wind sample every minute while CSC gets data every second. As a result, Weather Underground tends to underestimate max wind speed.