

Meteorology M.Sc. Summer Project, 2010/11.

Implementation of a 3D Sonic Anemometer at the UCD Automatic Weather Station

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The UCD Meteorology & Climate Centre has acquired AWS equipment. The goal of this project is to make use of the data from the AWS at the Rosemount site.

The equipment includes a 3D Sonic Anemometer, capable of measuring the three Cartesian components of the wind.

The student should:

- Familiarize himself/herself with the equipment that has been purchased and installed
- Study the relevant documentation to establish the method and sequence of implementing the range of sensors.
- Learn the fundamentals of the programming language, CRBasic, that is used to control the system.
- Become familiar with the data logger (CR3000) and the LoggerNet system.
- Acquire a time series of observational data.
- Compare the 3D data with the 2D sonic and Cup-&-Vane data.
- Validate the data by comparison with Met Eireann observational data from nearby locations.

Possibilities for application of the AWS data

- Study the diurnal cycle
- Investigate the season/Annual cycle
- Investigate individual frontal passages
- Study particular severe/extreme weather events
- Local climatology (Compare with Dublin Airport and Casement data)

The method and results will be presented in a report.