

## FSU DAC QUALITY EVALUATION FLAGS

A description of FSU DAC quality evaluation flags. A more detailed description of the quality evaluation process can be found at:

<http://www.coaps.fsu.edu/woce/docs/qchbook/qchbook.htm>

The quality control flags are single alphabetic characters for each data value. Only those variables with a *qcindex* in the original one-minute data files have flag values (the *qcindex* is an integer pointer to the flag for a selected variable), i.e. not all meteorological variables are quality controlled. More details on the *qcindex* are available at:

[http://www.coaps.fsu.edu/RVSMDC/WOCE/qccodes\\_netcdf.shtml](http://www.coaps.fsu.edu/RVSMDC/WOCE/qccodes_netcdf.shtml)

<b>A</b>	Original data had unknown units. The units shown were determined using a climatology or some other method.
<b>B</b>	Original data were out of physically realistic range bounds outlined.
<b>C</b>	Time data are not sequential or date/time not valid.
<b>D</b>	Data failed $T \geq T_w \geq T_d$ test. In the free atmosphere, the value of the temperature is always greater than or equal to the wet-bulb temperature, which in turn is always greater than or equal to the dew point temperature.
<b>E</b>	Data failed resultant wind re-computation check. When the data set includes the platform's heading, course, and speed along with the platform relative wind speed and direction, a program re-computes the earth relative wind speed and direction and compares the computed values to the reported earth relative wind speed and direction. A failed test occurs when the wind direction difference is $> 20$ degrees or the wind speed difference is $> 2.5$ m/s.
<b>F</b>	Platform velocity unrealistic. Determined by analyzing latitude and longitude positions as well as reported platform speed data.
<b>G</b>	Data are greater than 4 standard deviations from the COADS climatological means (da Silva et al. 1994). The test is only applied to pressure, temperature, sea temperature, relative humidity, and wind speed data.
<b>H</b>	Discontinuity found in data.
<b>I</b>	Interesting feature found in data. More specific information on the feature is contained in the data reports. Examples include: hurricanes passing stations, sharp seawater temperature gradients, strong convective events, etc.
<b>J</b>	Data are of poor quality by visual inspection, DO NOT USE.
<b>K</b>	Data suspect/use with caution – this flag applies when the data look to have obvious errors, but no specific reason for the error could be determined.
<b>L</b>	Oceanographic platform passes over land or fixed platform moves dramatically.
<b>M</b>	Known instrument malfunction.
<b>N</b>	Signifies that the data were collected while the vessel was in port. Typically these data, though realistic, are significantly different from open ocean conditions.
<b>O</b>	Original units differ from those listed in the <i>original_units</i> variable attribute. See quality control report for details.
<b>P</b>	Position of platform or its movement are uncertain. Data should be used with caution.

<b>Q</b>	Questionable - data arrived at DAC already flagged as questionable/uncertain.
<b>R</b>	Replaced with an interpolated value. Done prior to arrival at the DAC. Flag is used to note condition. Method of interpolation is often poorly documented.
<b>S</b>	Spike in the data. Usually one or two sequential data values (sometimes up to 4 values) that are drastically out of the current data trend. Spikes occur for many reasons including power surges, typos, data logging problems, lightning strikes, etc.
<b>T</b>	Time duplicate
<b>U</b>	Data failed statistical threshold test in comparison to temporal neighbors. This flag is output by automated Spike and Stair-step Indicator (SASSI) procedure developed by the DAC.
<b>V</b>	Data spike as determined by SASSI.
<b>X</b>	Step/discontinuity in data as determined by SASSI
<b>Y</b>	Suspect values between X-flagged data (from SASSI)
<b>Z</b>	Data passed evaluation.