TRIAXYS™ vs. Datawell

Important Points to Consider When Comparing TRIAXYS™ with Datawell:

- Comparison of Battery Cost Savings for TRIAXYS™ over Datawell

TRIAXYS™ batteries have a nominal lifespan of 5 years. At a replacement cost of approximately $200 US each you can expect $800 US in battery replacement costs for four batteries once every 4-5 years (batteries can be replaced in less than one hour). TRIAXYS™ is compatible with batteries that can be sourced from numerous suppliers and are readily available. By contrast, Datawell requires 85 new batteries every eight to twelve months that can only be obtained from Datawell. A cost estimate is approximately $2,500 US per set and it takes approximately 4 to 6 hours to do this work once each year and this must be done on shore. Expenses will include vessel time to carry out battery replacements.

- Calibration Comparison of TRIAXYS™ & Datawell

It is well known that the design of the accelerometer inside the Datawell buoy is such that it is susceptible to rough handling, excessive rotations and temperatures below –5 C. It is also known, but perhaps not so widely, that the accelerometer does not have a linear response to heave with frequency (i.e.: for a given heave, the reported value will change depending on the wave frequency). This is not the case with the TRIAXYS™ buoy since the accelerometers are solid state and equally sensitive to longer period waves.

An illustration of this is given in the following table taken from some recent calibrations done at AXYS on Datawell buoys and on the TRIAXYS™ buoy deployed in a comparative study conducted in the United Kingdom.

	Calibrator Period	Buoy Measured Period	Calibrator Height	Buoy Measured Height
Typical Datawell	**4.97**	**5.00**	**2.00**	2.00*
Typical Datawell	**10.67**	**10.67**	**2.00**	2.01*
Typical Datawell	**19.51**	**20.00**	**2.00**	1.96*
Typical Datawell	**25.81**	**25.81**	**2.00**	1.75*
TRIAXYS™ **TAB00701**	**5.000**	**5.009**	**2.00**	**1.999**
TRIAXYS™ **TAB00701**	**10.000**	**10.016**	**2.00**	**2.004**
TRIAXYS™ TAB00701	**15.000**	**15.067**	**2.00**	**2.008**
TRIAXYS™ **TAB00701**	**20.000**	**20.035**	**2.00**	**2.013**
TRIAXYS™ **TAB00701**	**25.000**	**25.080**	**2.00**	**2.017**

*Note the increase in height measurement error as the wave period increases.
For example, at a 26 second period the error is almost 13%!