



Windwords



An Applied Technologies, Inc. Publication

Volume 11 - Summer 2016

This Issue of Windwords

Welcome to the Summer 2016 issue of 'Windwords'. In this issue you will find the following topics...

For The Record - More History - The Boulder Atmospheric Observatory (BAO).

New and Interesting - "Trisonica" - The latest sonic anemometer offered by Applied Technologies.

Just The Facts - A word about "Flow Distortion" and a bit about temperatures.

For the Fun of it - For this election year, some "Apolitical Aphorisms".

For those of you who have just received your first copy of Windwords - we invite you to take a look at some previous issues. The Windwords Archive can be found on our website: www.apptech.com/windwords.html

Do you have a special application that requires a wind velocity measurement, but the off-the-shelf sonic anemometers don't physically fit your application? Call the ATI factory, we have no problem adapting and tailoring our sonic technology to your application.

**Do you have more than one sonic anemometer on a tower?
Wouldn't it be better if they all took data at the same time?
Would you like your multiple sonic anemometers to all take data during the exact same time frame?
Would you like the sonics to operate exactly the same during the sampling time?
Would you like your sonics to be synchronized together?**

The ATI Sonics can do all this, with the help of our DataPacker!!!

New and Interesting



Special Note:

In our last Windwords, we talked about one of our sonic anemometers being sent on a trip to the Stratosphere. They have made the trip, but the ATI sonic appeared to have a problem after having gotten through the low-temp zone. We don't know yet what the problem might be, but we are expecting to get the instrument back so we can check it. We'll let you know what we find when we get some results.

Trisonica



Applied Technologies, Inc. proudly presents our newest Solid State Wind System, the "Trisonica". This unit was developed for horizontal air flow, but can also do 3D if needed and comes with a large set of options along with sensors for temperature, humidity, pressure, and acceleration. With these options, this instrument has the ability to meet a variety of application needs.

For The Record...



We have another paper for our [History of Sonic Technology](#) link. It is "the Boulder Atmospheric Observatory". For those of you who are interested in the history, or just interested in the BAO, the BAO is a unique research facility that was instrumented with some of the first sonic anemometers. It was built for studying the planetary boundary layer, but was also made available for testing and calibrating atmospheric sensors.

You can find this new paper on our website in the "History of Sonic Technology" tab, or click the link above to go directly to that webpage.

For the Fun of it!

For this election year - some Apolitical Aphorisms

If God wanted us to vote, he would have given us candidates.

~Jay Leno

The problem with political jokes is they get elected.

~Henry Cate

Politicians are the same all over, they promise to build a bridge even where there is no river.

~Nikita Khrushchhev

Why pay money to have your family tree traced, go into politics and your opponents will do it for you.

~Anonymous

I have come to the conclusion that politics is too serious a matter to be left to the politicians.

~Charles de Gaulle

Politicians are people who, when they see light at the end of the tunnel, go out and buy more tunnel.

~John Quinton

I offer my opponents a bargain; if they will stop telling lies about me, I will stop telling the truth about them.

~Adlai Stevenson

Check out the data sheet and specifications on our website or just click [here](#) to go directly to the new page.

Just The Facts



Temperature and humidity

Does your sonic anemometer measure temperature without any humidity correction? The ATI sonic can do that if needed.

But, would you rather have the actual temperature calculated corrected for humidity? The ATI sonic will also provide that information.

The default calculation for temperature in the ATI sonic is 50% humidity, so any reading will be within $\pm 1.2^{\circ}\text{C}$. With the ATI sonic, the operator has the ability to change that humidity value to be as accurate as possible.

When the appropriate numbers are used for the calibration and during operation, the ATI sonic can give you a temperature, accurate to $\pm 0.05^{\circ}\text{C}$.

Flow Distortion Correction

As we mentioned in our last Windwords, the non-orthogonal probes also have flow distortion and require correction. As also mentioned, the new software of the ATI sonic "A" probe has the new flow distortion correction now included.

Testing has shown that the ATI non-orthogonal probe, for the general user that requires a higher range probe and only requires statistical summaries, we have a simple percentage correction. For the user who wants eddy correlation calculations of fluxes of parameters like momentum and moisture, we have an inclination angle correction which provides a better adjustment. These two corrections are now part of the command sequence available to the user.

There have been several requests. For those of you that may have an older version of the sonic "A" probe and are using it in an application requiring the new correction, there is no reason to keep post-processing your data. The sonic can be upgraded. Consult Applied Technologies, Inc. for details.

A politician is a fellow who will lay down your life for his country.

~Tex Guinan

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