

This study measures temperature differences between two parallel actively heated fiber-optic cables with microstructures to further determine the wind direction. The study fits the scope of Atmospheric Measurement Techniques. The authors have addressed most of my previous comments. However, I still have one major concern.

Thank you for your comments. They strengthened the paper.

5 Major comments (1) There are unclear places in the derivation of equation (6) from equation (3).

Here I omit the equations for brevity

Please show how to derive from the above equation to equation (6), i.e.,

$$\frac{Q_{left} - Q_{right}}{\rho c_p \left(\frac{h}{\nu}\right)^{-m}} u_*^{(m-1)} = \left(\frac{(T_a - T_{right})}{\alpha_{right}} - \frac{(T_a - T_{left})}{\alpha_{left}} \right)$$

You are correct, we made a mistake in the algebra getting from equation 3 to equation 6. We now have revised section 2.1.

10 Equation 6 is now:

$$\left(\frac{T_{left}}{\alpha_{left}} - \frac{T_{right}}{\alpha_{right}} \right) = \frac{Q_{right} - Q_{left}}{\rho c_p \left(\frac{h}{\nu}\right)^{-m}} u_*^{m-1} - T_a \left(\frac{1}{\alpha_{right}} - \frac{1}{\alpha_{left}} \right)$$

and the text has been revised to make it explicit that we are only searching for a non-linear decaying relationship between wind speed and the temperature difference, not an exact representation.