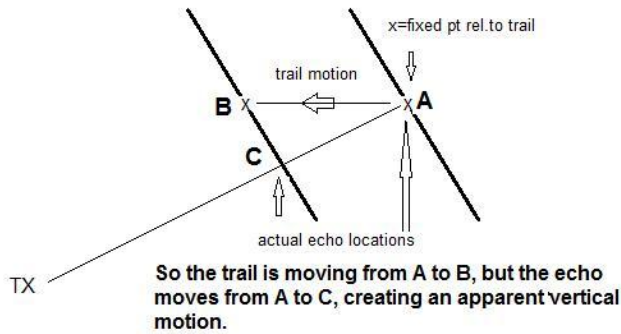


Trail moving horizontally



Trail moving vertically

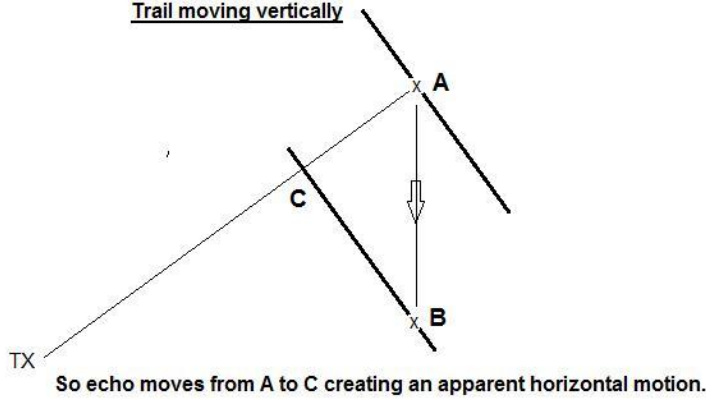


Figure 1: Top: Illustration of a trail and its echo location under top:wholly horizontal wind condition. bottom: for wholly vertical wind.

I strongly disagree with the basis of this paper. The basis as stated at the beginning of section 3 is that the measured radial velocity represents the component of actual atmospheric motion in the radial direction. In fact for specular reflection from a line reflector, what is seen is the radial motion of the reflection point. The reflection point is the intersection between the line reflector and the line of sight. This is only the atmospheric motion if the line reflector (meteor trail) is horizontal. Otherwise the difference depends on the trail orientation (rotation) with respect to the line of sight

For example, imagine that the wind has no vertical component. Then any trail seen above the horizon cannot have a vertical component of motion, but the radial velocity appears to have one. That is, vertical and horizontal are inextricably linked.

The figure shows this graphically