Hi Mike,

I read through the paper. I think it’s in pretty good shape. Good work.

I think you can move me down the author list. I don’t feel like I contributed enough to be listed 2nd.

In “key points”: Consider rewriting the first key point to emphasize the observation approach. As written, the 2nd and 3rd key points already imply the 1st. So, maybe use something like this instead: “AC6 observes microbursts at a variety of spatial separations from 2 to 800 km.”

In section 4.2, I don’t think the you need that proof of Bayes’ theorem.

In Figures 3 and 4, the y-axis titles aren’t great. The legend is doing too much work. Some suggestions: (a) Fraction of Microbursts Larger Than X, (b) Microburst Size Histogram, (c) Samples Per Bin. Maybe change (a) to a percent. “Fraction of” is always sort of awkward.

Figure 6 needs a plain language title or label indicating what kind of pdf is being used (single microburst size). The formula with a delta function is precise, but not clear. Figure 7 labeling is fine. In both 6 and 7, I think the horizontal blue line is the prior probability density, but I don’t see where this is mentioned.

You use PD a lot in the paper for probability density. I don’t think I’ve ever seen that abbreviated that way. Usually people abbreviate PDF for probability density function and CDF for cumulative distribution function.

Also, on notation: you’re using the complementary CDF, sometimes called the survival function. People usually denote the CDF as F(s), and you’re using F(s) to be the complementary CDF. Your paper is clear that you mean F(s) to be the cCDF, but it is a little inconsistent with other work. You might instead use P>(s) or F>(x) to clarify that it’s the cCDF. Also, generally, for continuous variables, lower-case is used for the PDF, so p(r), and upper case for the CDF, so P(r). (For discrete variables, people use upper and lower case willy-nilly, which sucks).

You never conclusively state that the continuous distributions (log-normal, etc) didn’t work as well as the two-delta case. That’s worth elaborating on. Nature is surely not actually giving us two deltas, but maybe it is bimodal.

-paul