Ms. Particular is particularly horrified by the hordes of naked “this”es that parade shamelessly through scientific articles. While a reader lacking Ms. Particular’s finely tuned sensibilities may not be shocked by a naked “this,” he or she will invariably be confused by one.

Here’s an example:

“In some pellet designs, the average ionic charge, Z, and the laser intensity, I, are large enough that the distribution function is predicted to be non-Maxwellian (flat-topped). This has important consequences: reduction of the absorption rate, electron flux, and modification of the continuum x-ray emission rates.”

The question is: “This” what? The pellet design, Z, I, the non-Maxwellian distribution, all of the above, everything I’ve said up to this point in the paper??? WHAT????? (Sorry to shout, but Ms. Particular gets quite excited about this rhetorical flaw.)

Always follow “this” (and every other indefinite pronoun) with a clarifying noun that tells the reader what “this” you are referring to.