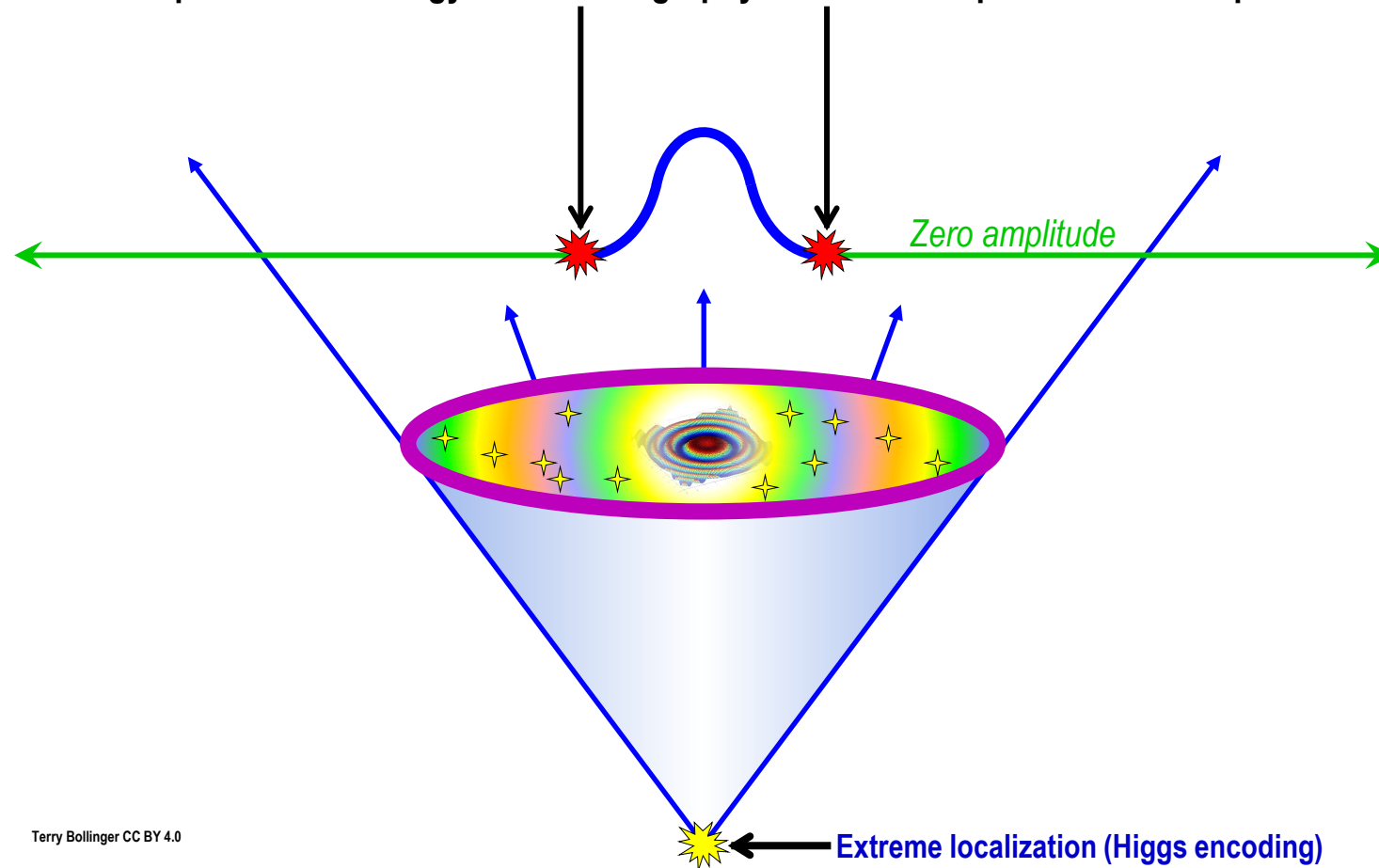


# Holography and Bump Functions Don't Mix Well

- Bump functions (distributions) capture the idea of wave function *localization*
- Notably, Dirac delta functions are the mathematical limits of bump functions
- Bump functions splice functions to guarantee  $C^\infty$  smoothness, but at a cost
- Bump-splice boundaries require *infinite* ( $f/\infty$ ) Fourier spectrum (momentum)
- Not possible for energy-limited holography based on real particles in real space



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