

3. COMPARISON OF THE METHODS

The figures above are to the same scale and have been cleaned up a great deal for display. If figure 1 there is a central spike more than 200 times the height of the F which has been removed and which you would need to mask out or avoid. Figure 2 shows flattening of the noise in the corners, which was done to make scaling possible. If you had an ideal system permitting display of both amplitude and phase the resulting image would be the same intensity as in these examples. You can not exceed 100% transparency which is what is presumed as the maximum here.

The noise background at the image is heigher than in the case of Nyquist frequency encoding because the the huge central spike which we masked out in the first example is distributed with the other noise. If you can avoid the background noise by the careful placement of the image and making it small compared to the array size either of these methods may work for you which very much depends upon the image desired.

You may want to quantify the noise for a specific example such as a Laguerre-Gauss function.