Testing the hybrid ray tracer

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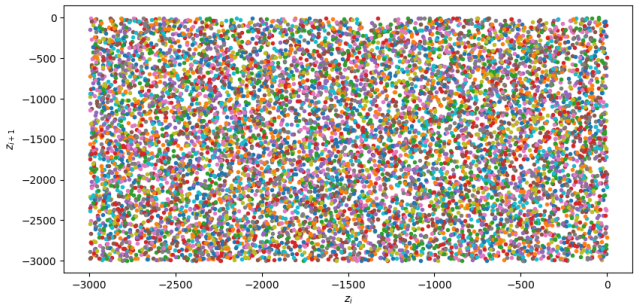
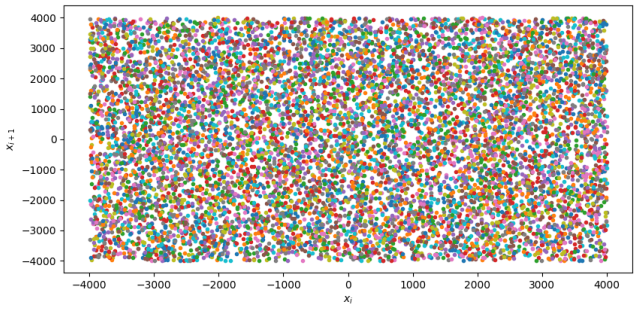
1 random number generator

We'll use the numpy random module to generate the random numbers, the considered square (as there is only a z component to the ice model the 3D problem is essentially only a 2D problem) is x:-4km,+4km and z:0,-3km. A good test to see if the generator is both random and uniform is to plot the next element to the previous element, here shown for the generated z coordinates, ,for the generated x coordinates, and for the cross of the two. This clearly is





a good random number generator and is the one we'll be using for the testing

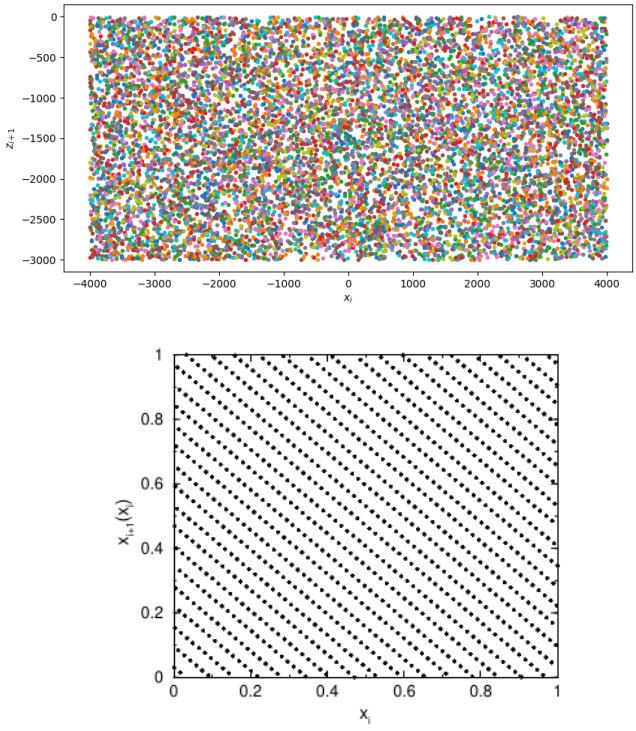


Figure 1: bad random number generator

of the hybrid ray tracer. As a counter-example, here is what a bad random number generator would look like