

04 - L-Shaped Plot

September 11, 2022

```
[1]: import h5py
import matplotlib.pyplot as plt
from os import listdir
from mpl_toolkits import mplot3d
import matplotlib.gridspec as gridspec

axisScale = 0.03
datasets = ['organic', 'gm_early', 'gm_late']
colours = ['green', 'blue', 'red']

for colour, dataset in enumerate(datasets):

    files = listdir('data/' + dataset)
    count = 0

    for file in files:

        f = h5py.File('data/' + dataset + '/' + file, 'r')

        ds_c = f['Coordinates']
        print (file)

        plt.figure(figsize = (14,14.39))
        plt.rcParams['font.size'] = '16'

        gs = gridspec.GridSpec(2,2)
        gs.update(wspace=0, hspace=0)

        ax1 = plt.subplot(gs[0])
        ax1.xaxis.set_visible(False)
        ax1.set_ylabel('y [Mpc]', rotation=90, labelpad=10)
        ax1.set_aspect('equal')
        ax1.spines['right'].set_visible(False)
        ax1.spines['bottom'].set_visible(False)
        ax1.set_xlim(left=-axisScale, right=axisScale)
        ax1.set_ylim(bottom=-axisScale, top=axisScale)
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    ax1.plot(ds_c[0:,0], ds_c[0:,1], '.', color=colours[colour],  

             markerSize=1)
    ax1.set_title = dataset + ' ' + file

    ax2 = plt.subplot(gs[1])
    ax2.yaxis.set_visible(False)
    ax2.set_xlabel('z [Mpc]', rotation=0, labelpad=10)
    ax2.set_aspect('equal')
    ax2.spines['left'].set_visible(False)
    ax2.set_xlim(left=-axisScale, right=axisScale)
    ax2.set_ylim(bottom=-axisScale, top=axisScale)
    ax2.plot(ds_c[0:,2], ds_c[0:,1], '.', color=colours[colour],  

             markerSize=1)

    ax3 = plt.subplot(gs[2])
    ax3.set_ylabel('z [Mpc]', rotation=90, labelpad=10)
    ax3.set_xlabel('x [Mpc]')
    ax3.set_aspect('equal')
    ax3.spines['top'].set_visible(False)
    ax3.set_xlim(left=-axisScale, right=axisScale)
    ax3.set_ylim(bottom=-axisScale, top=axisScale)
    ax3.plot(ds_c[0:,0], ds_c[0:,2], '.', color=colours[colour],  

             markerSize=1)

    ax4 = plt.subplot(gs[3], visible=False)
    ax4.set_aspect('equal')

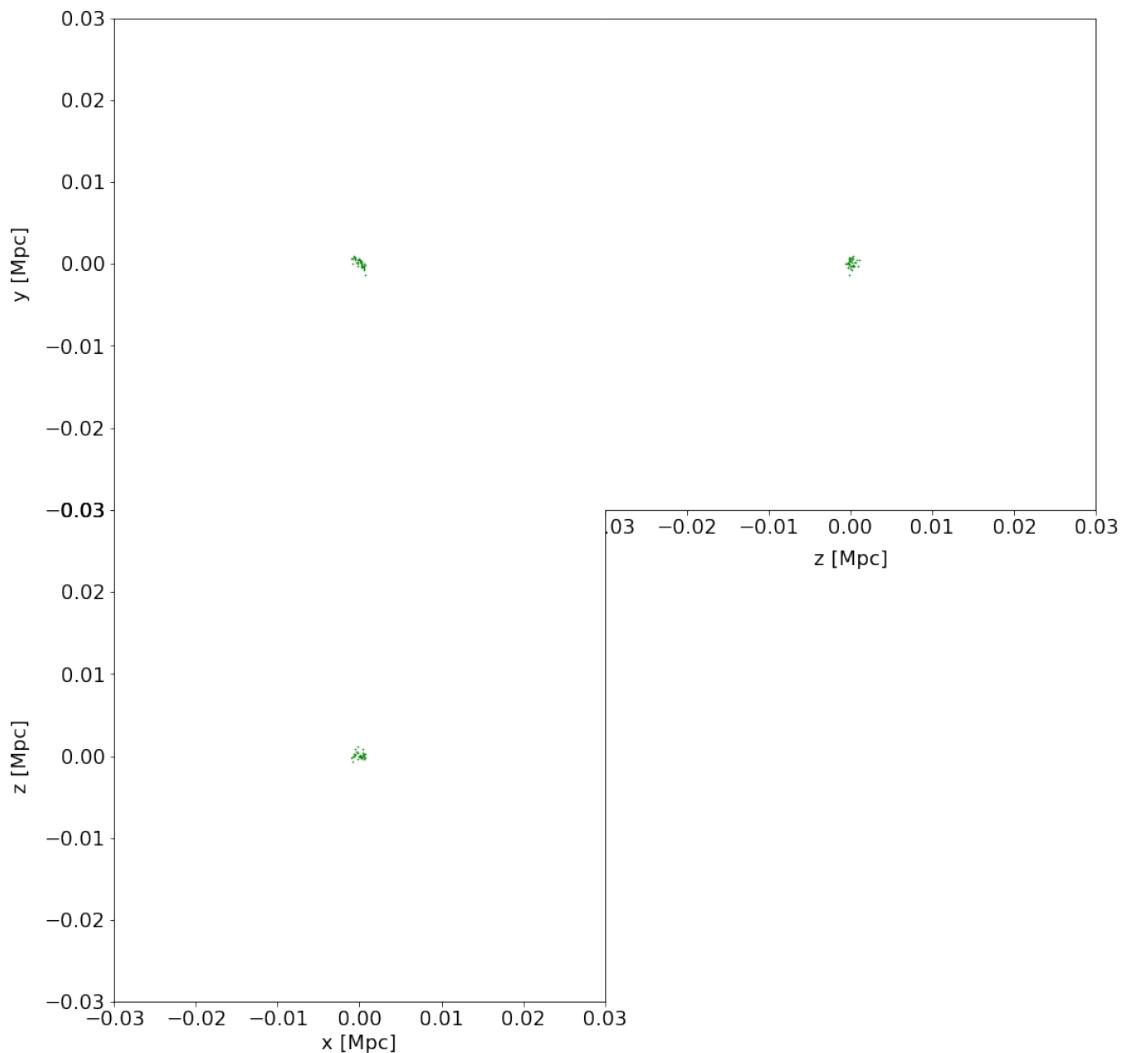
    plt.savefig('l-shaped\\' + dataset + '\\plot' + str(count) + '.png',  

                dpi=300)
    plt.show()
    count = count + 1

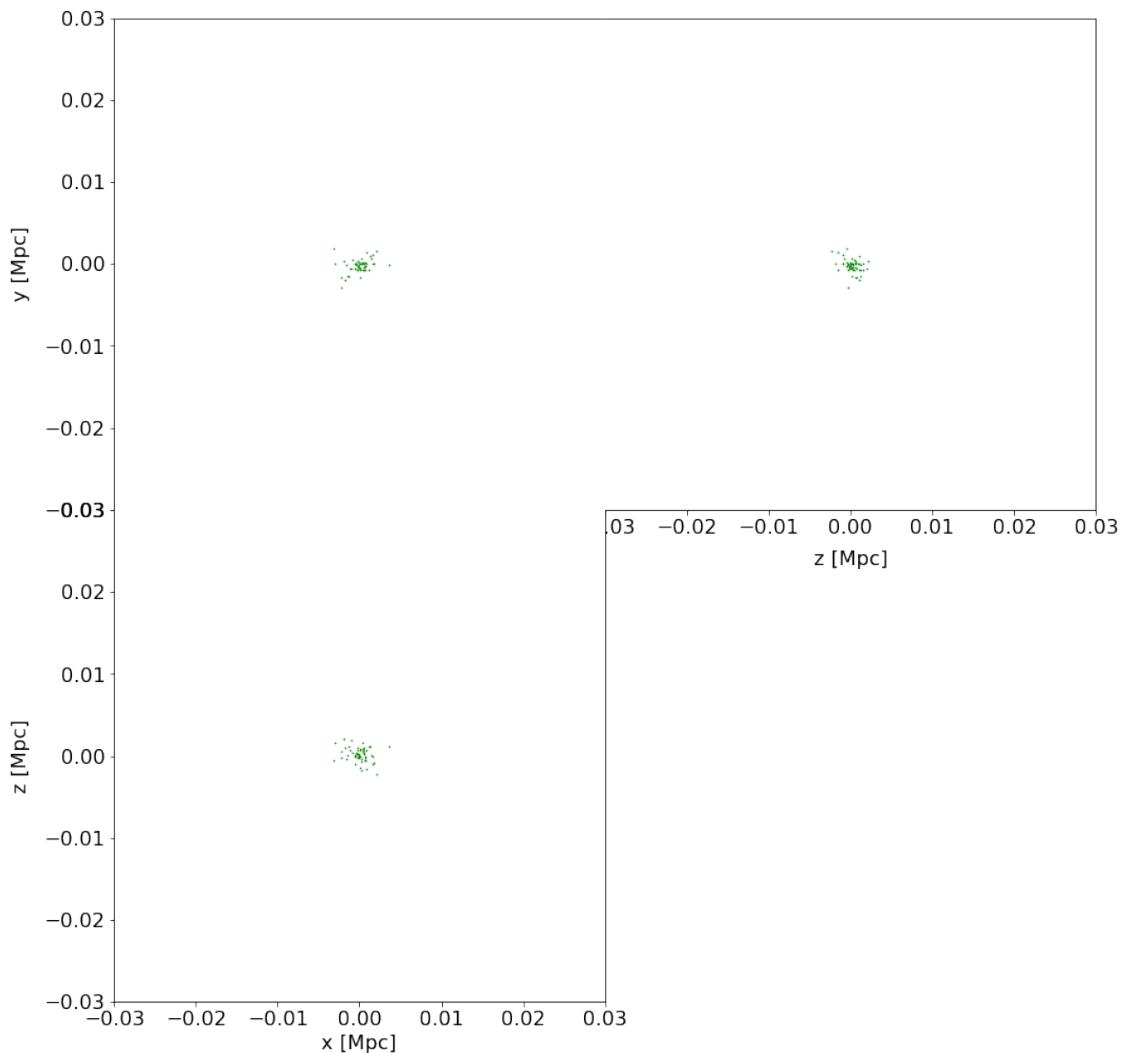
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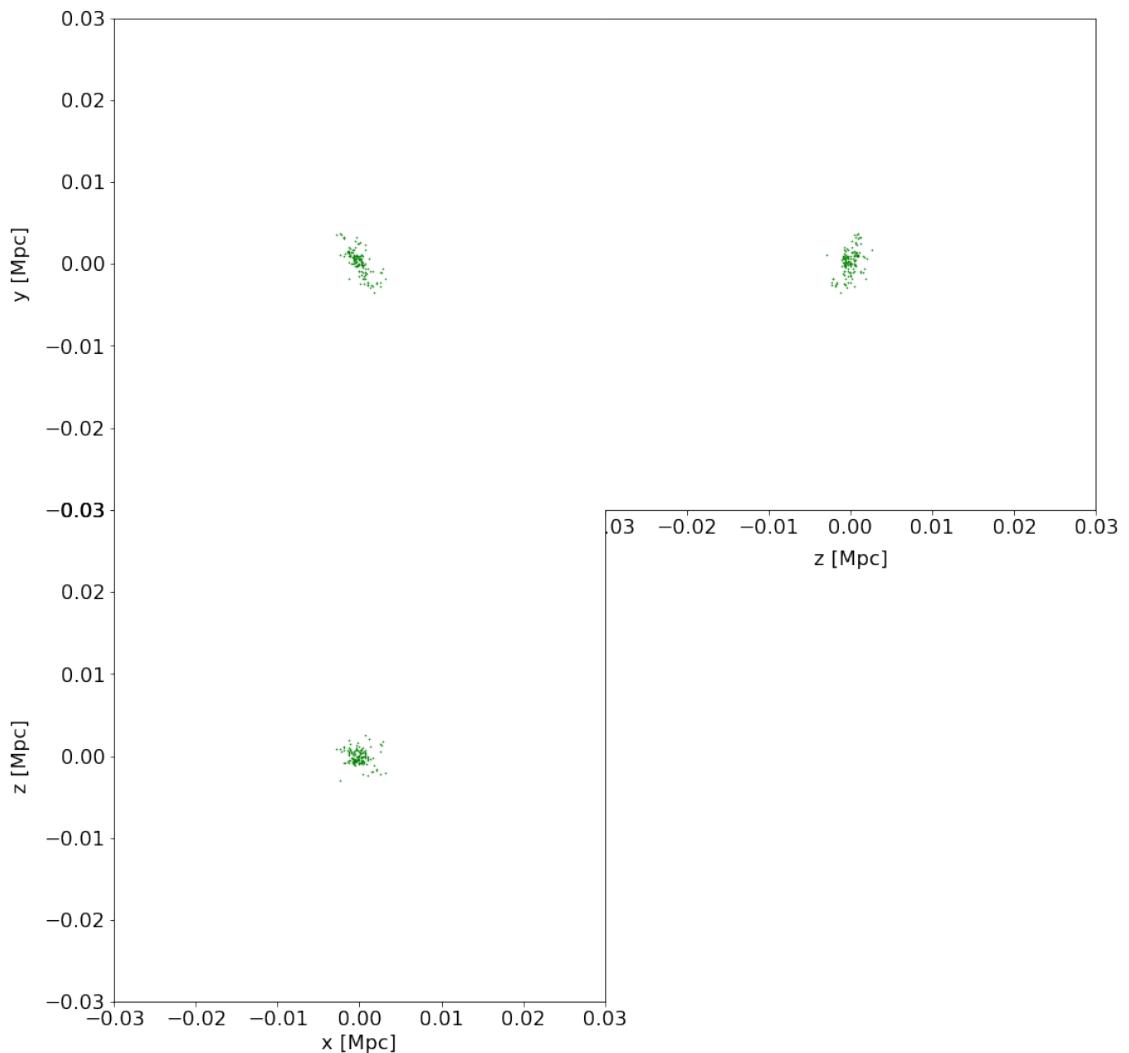
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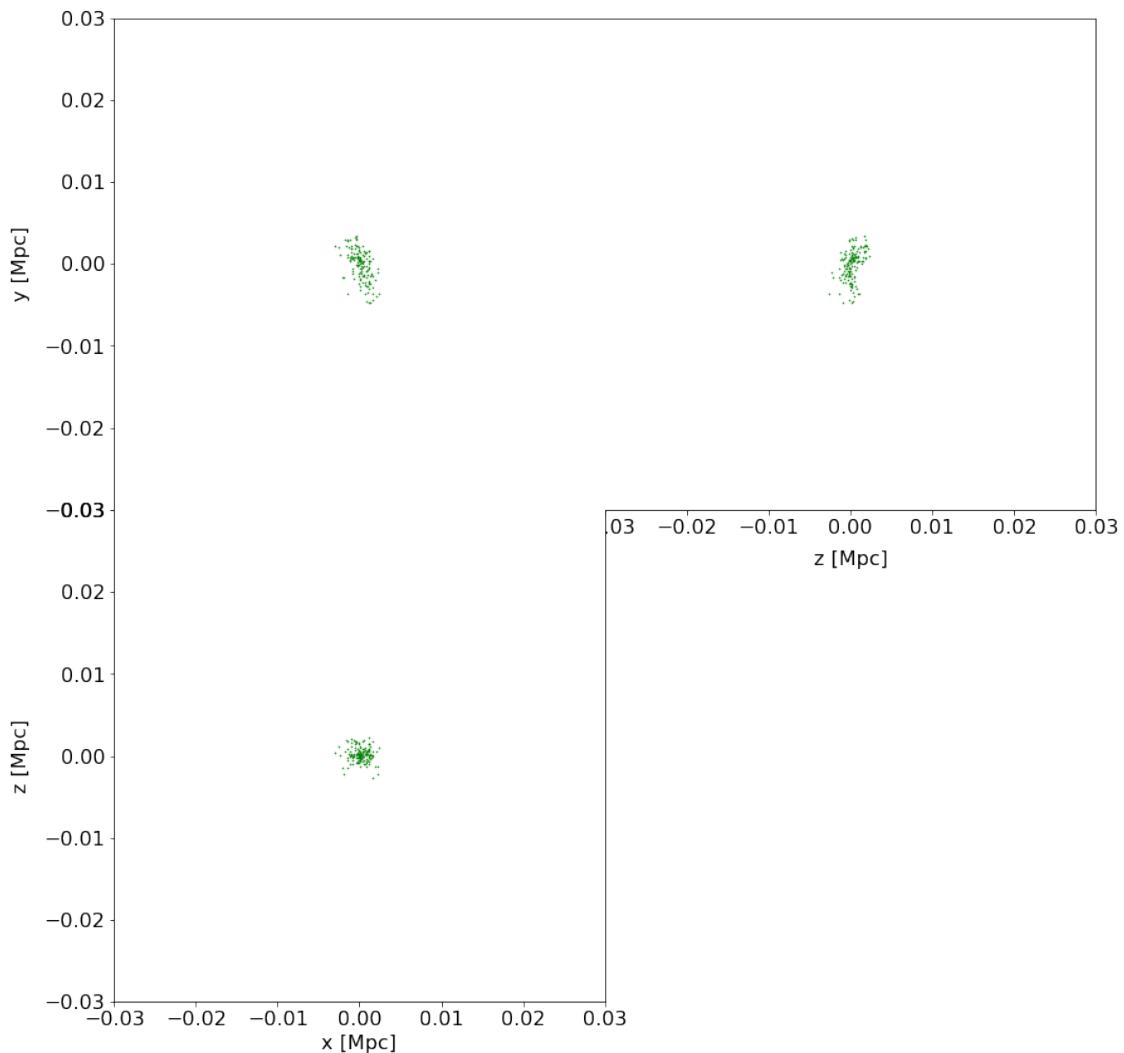
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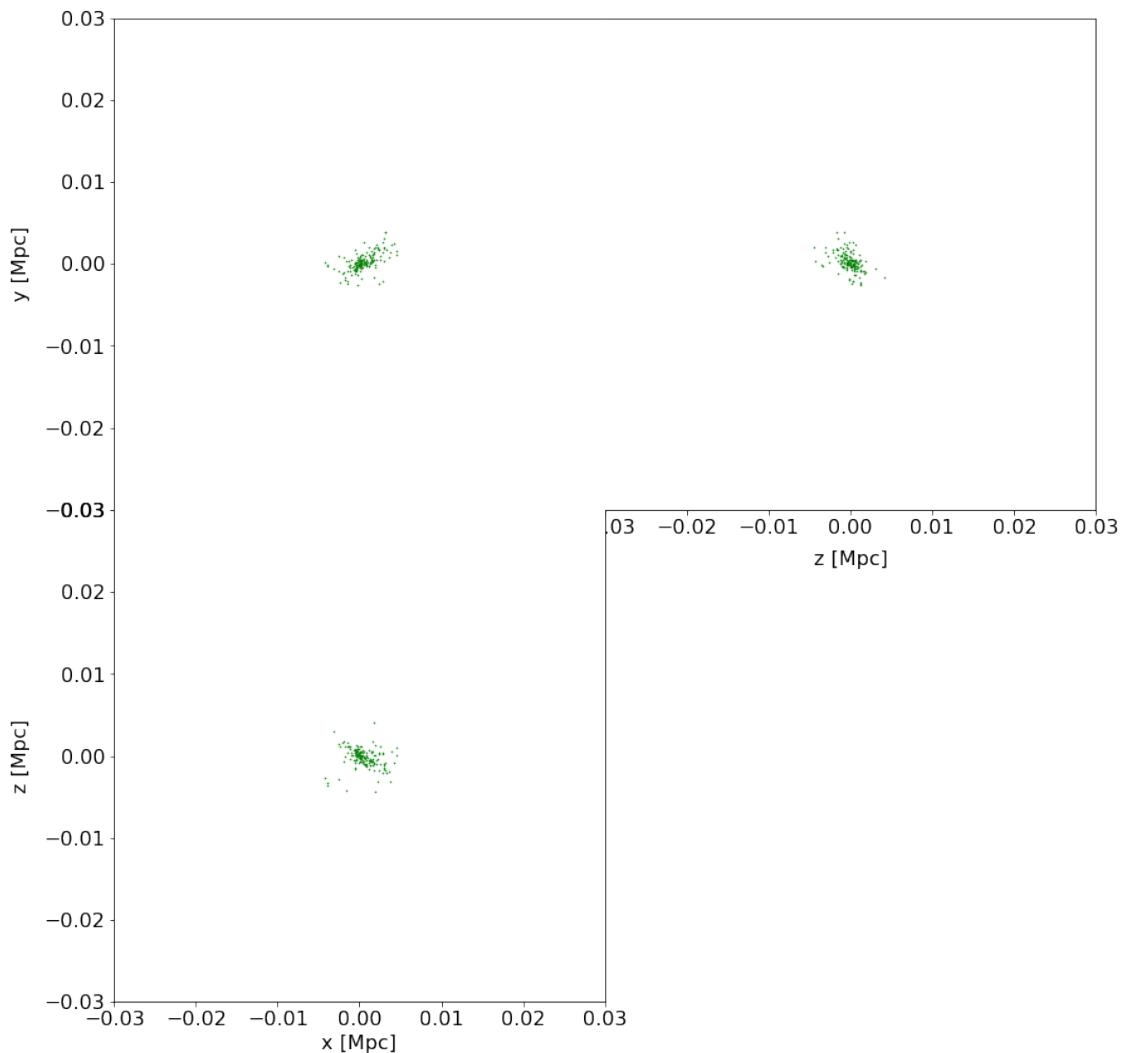
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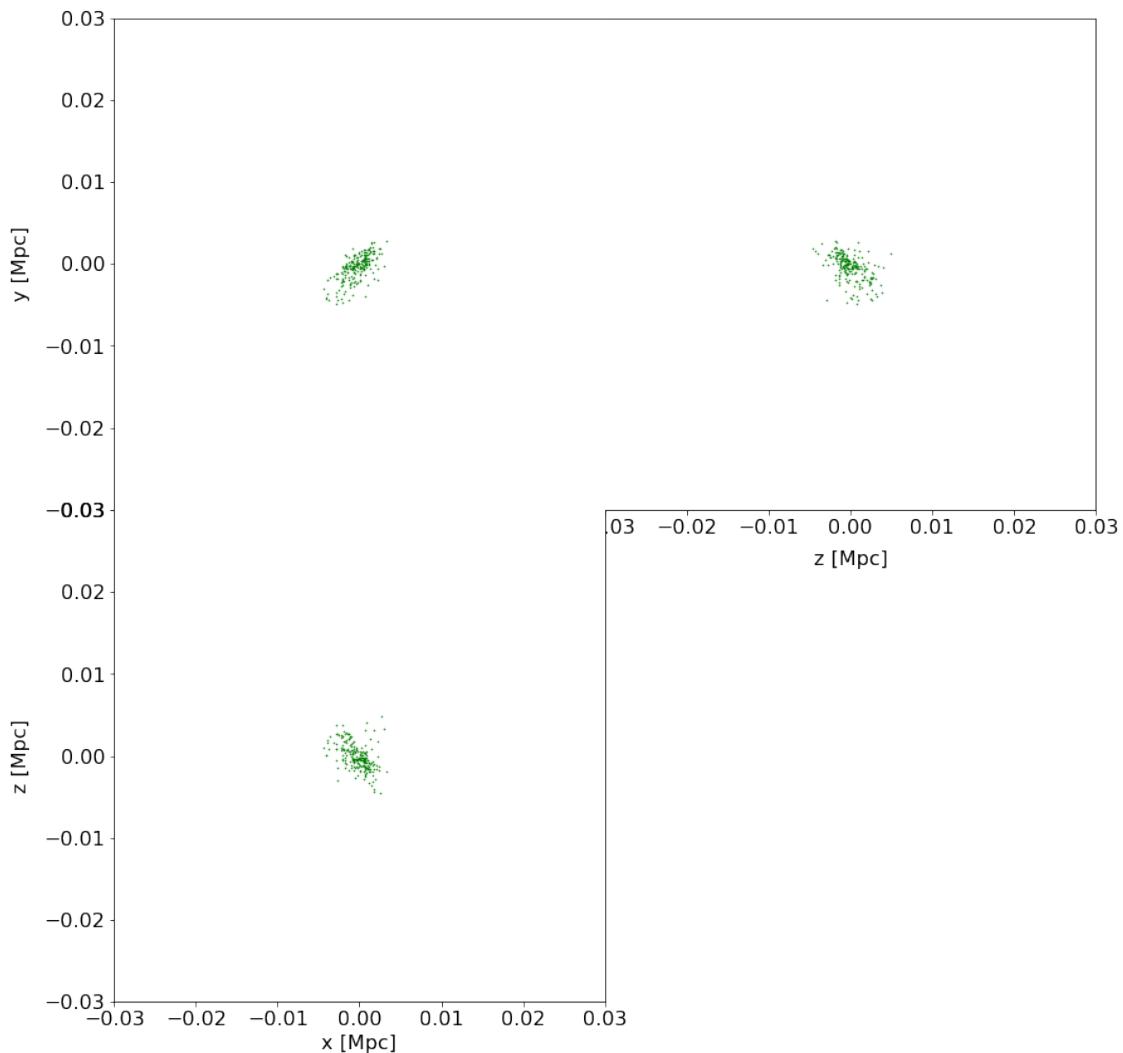
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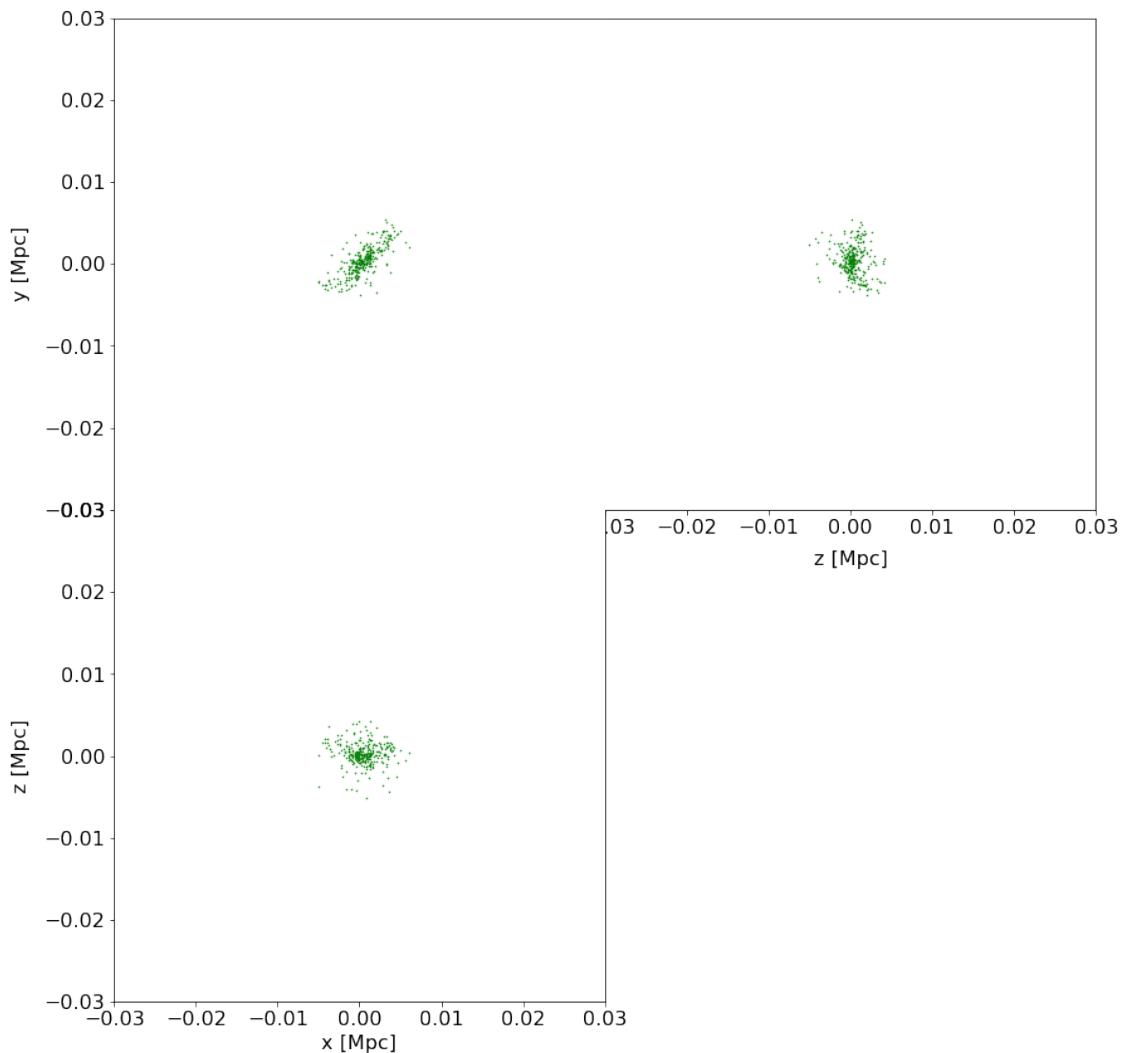
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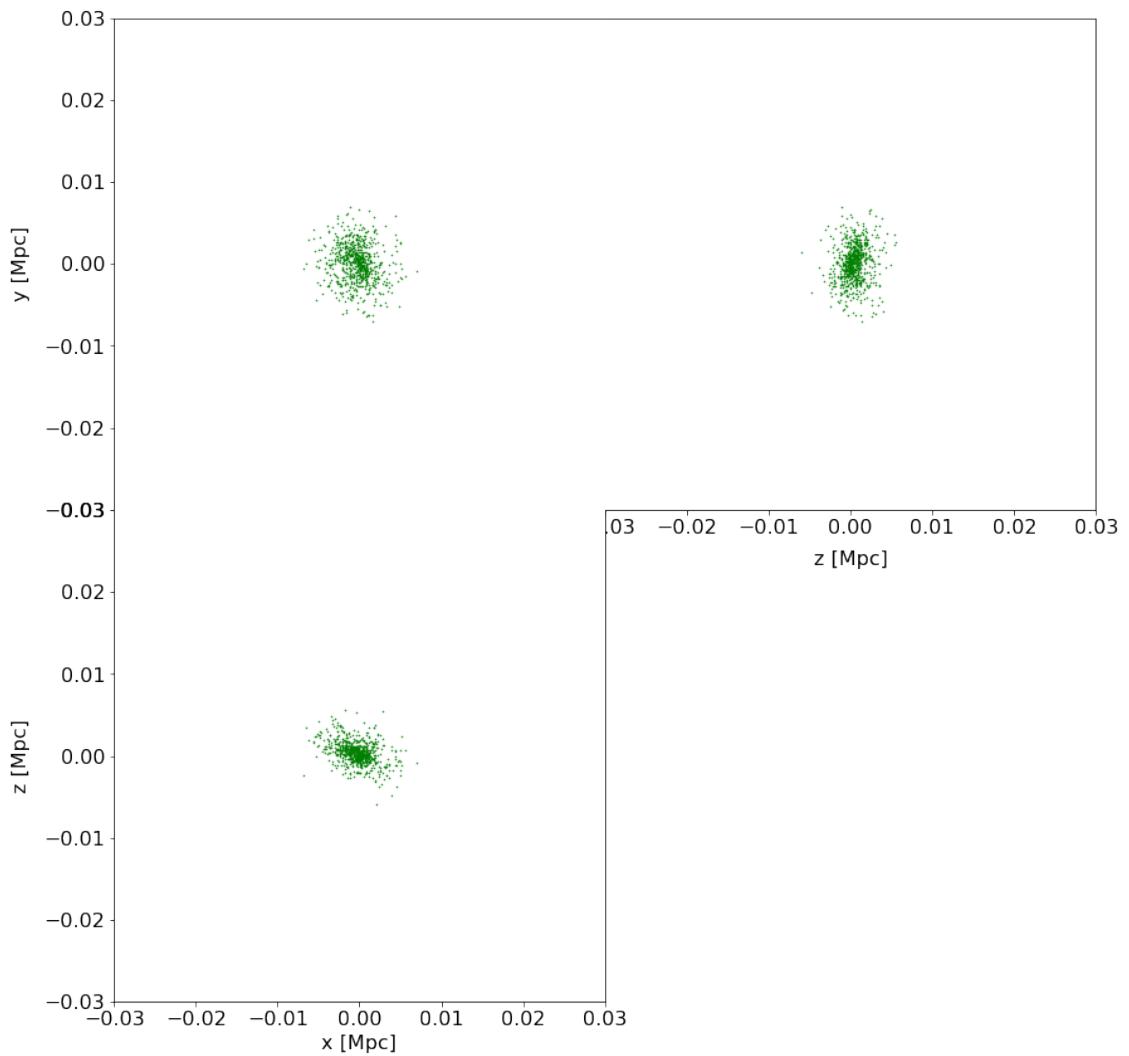
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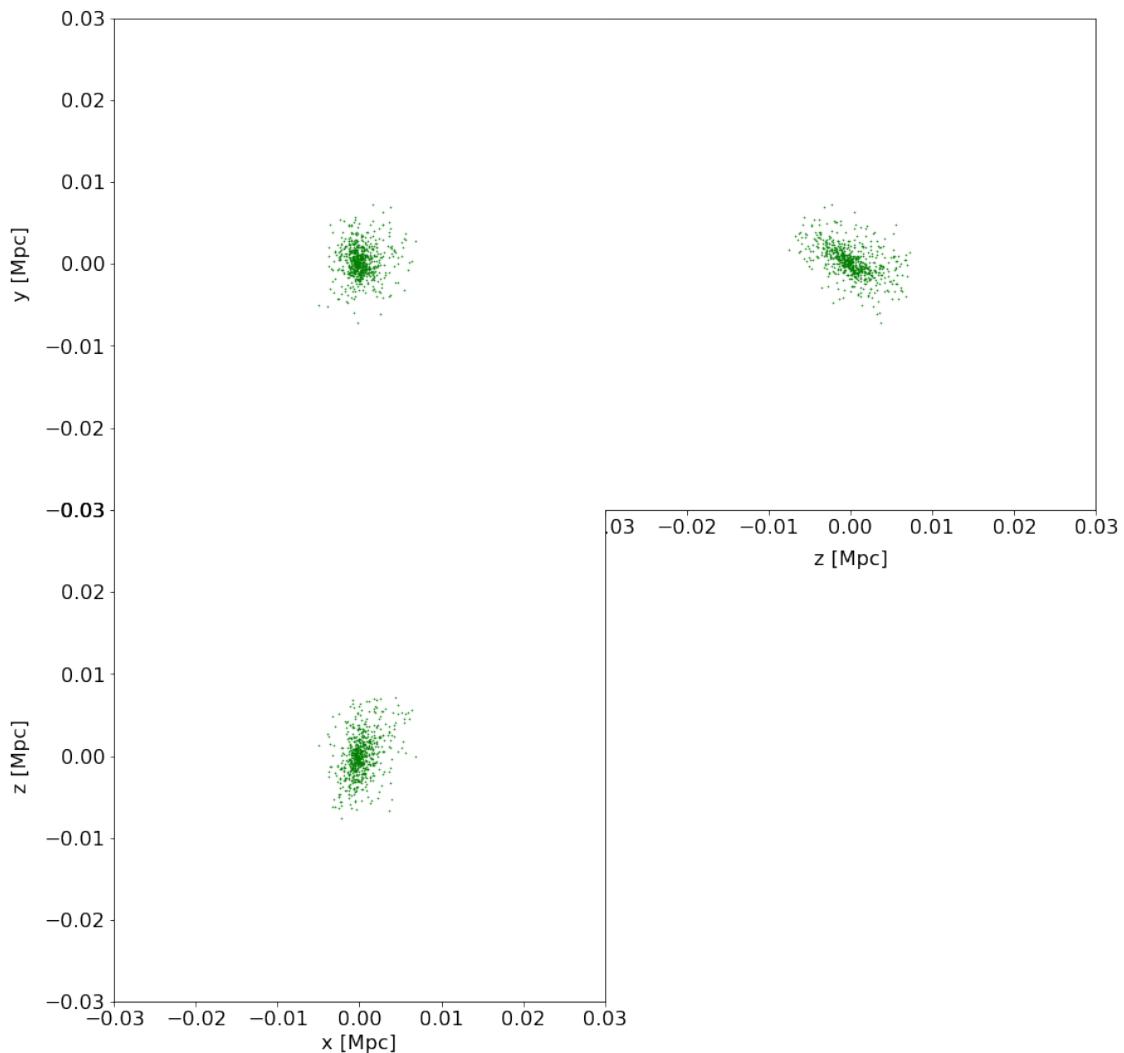
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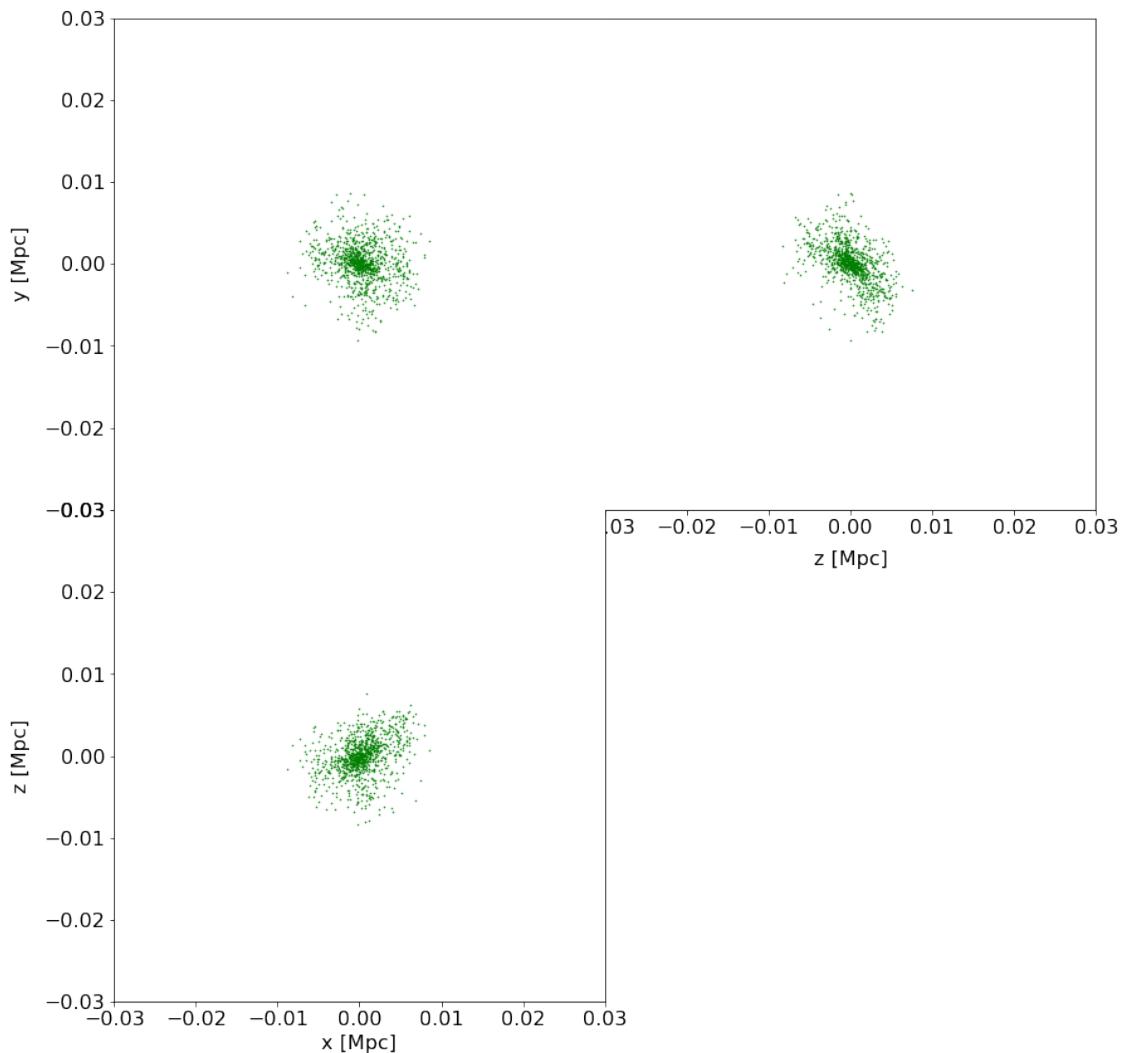
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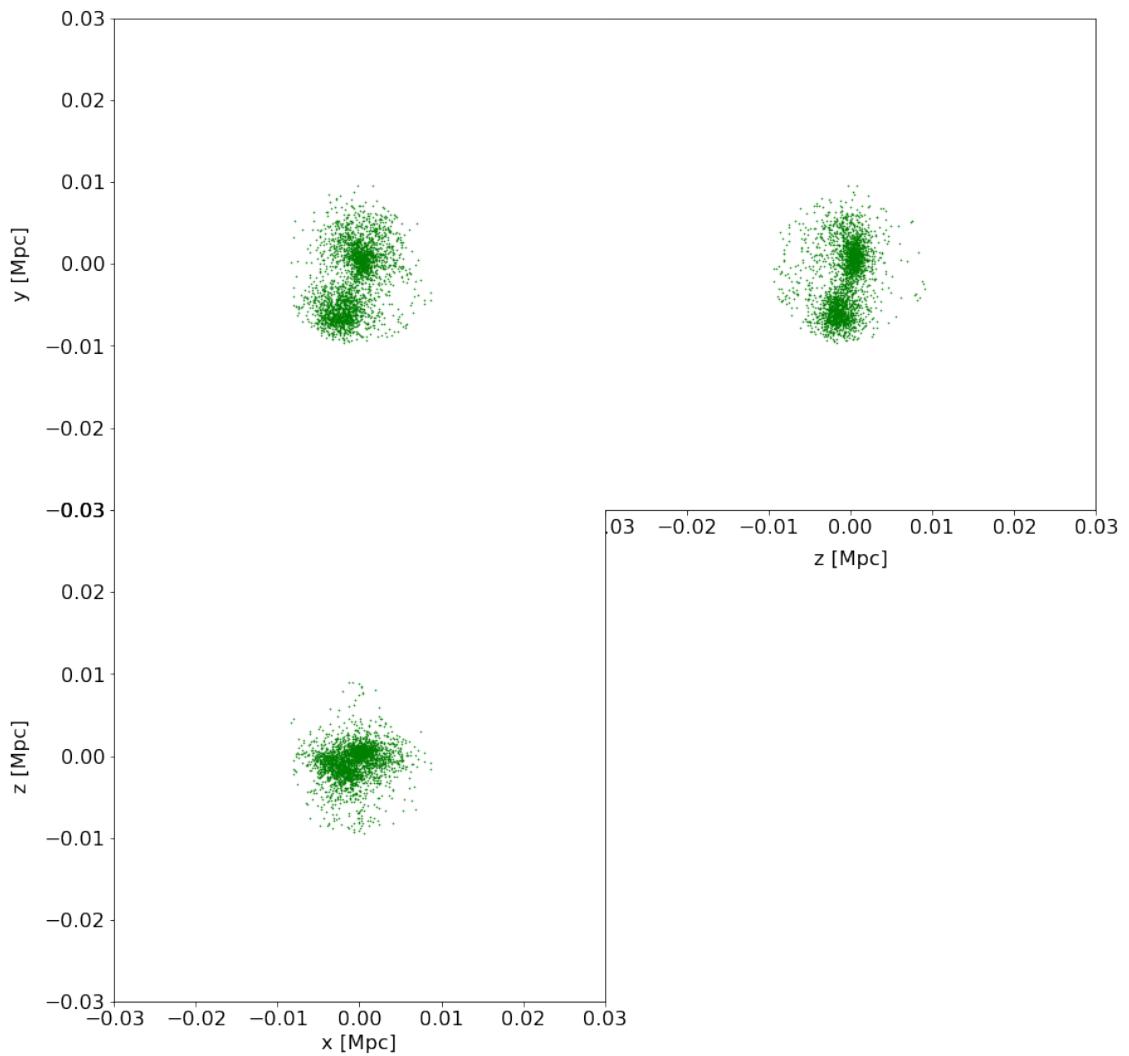
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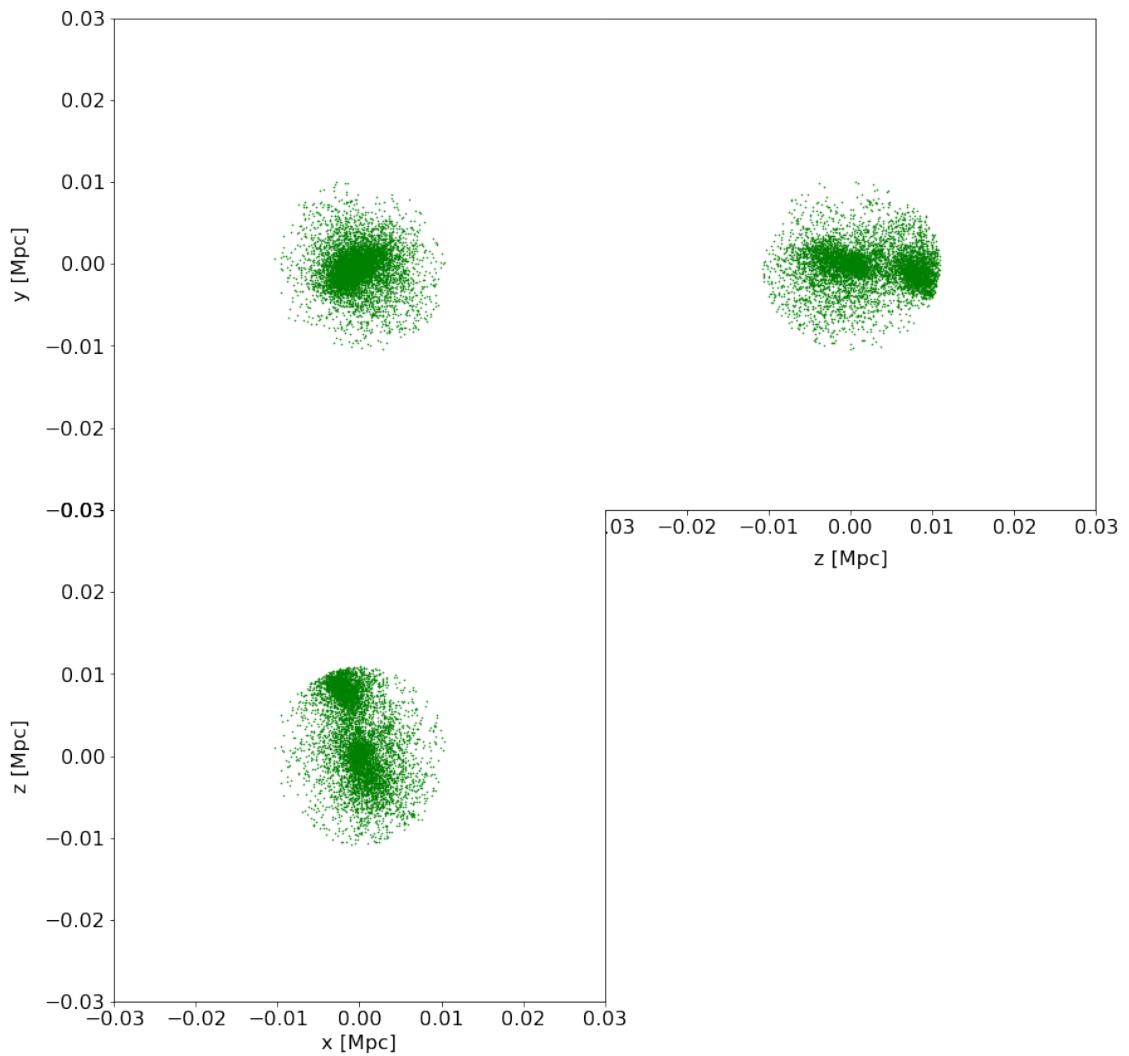
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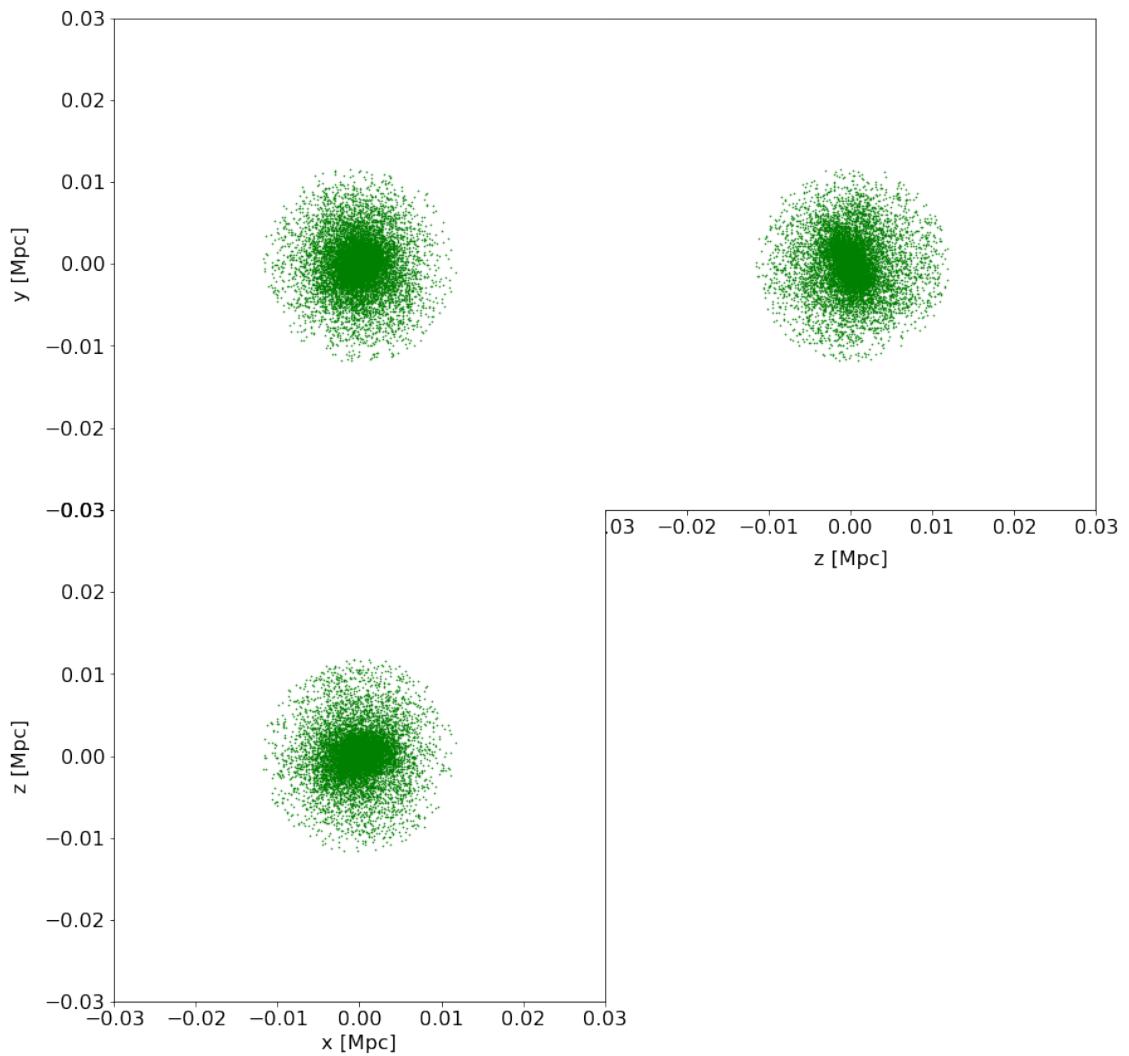
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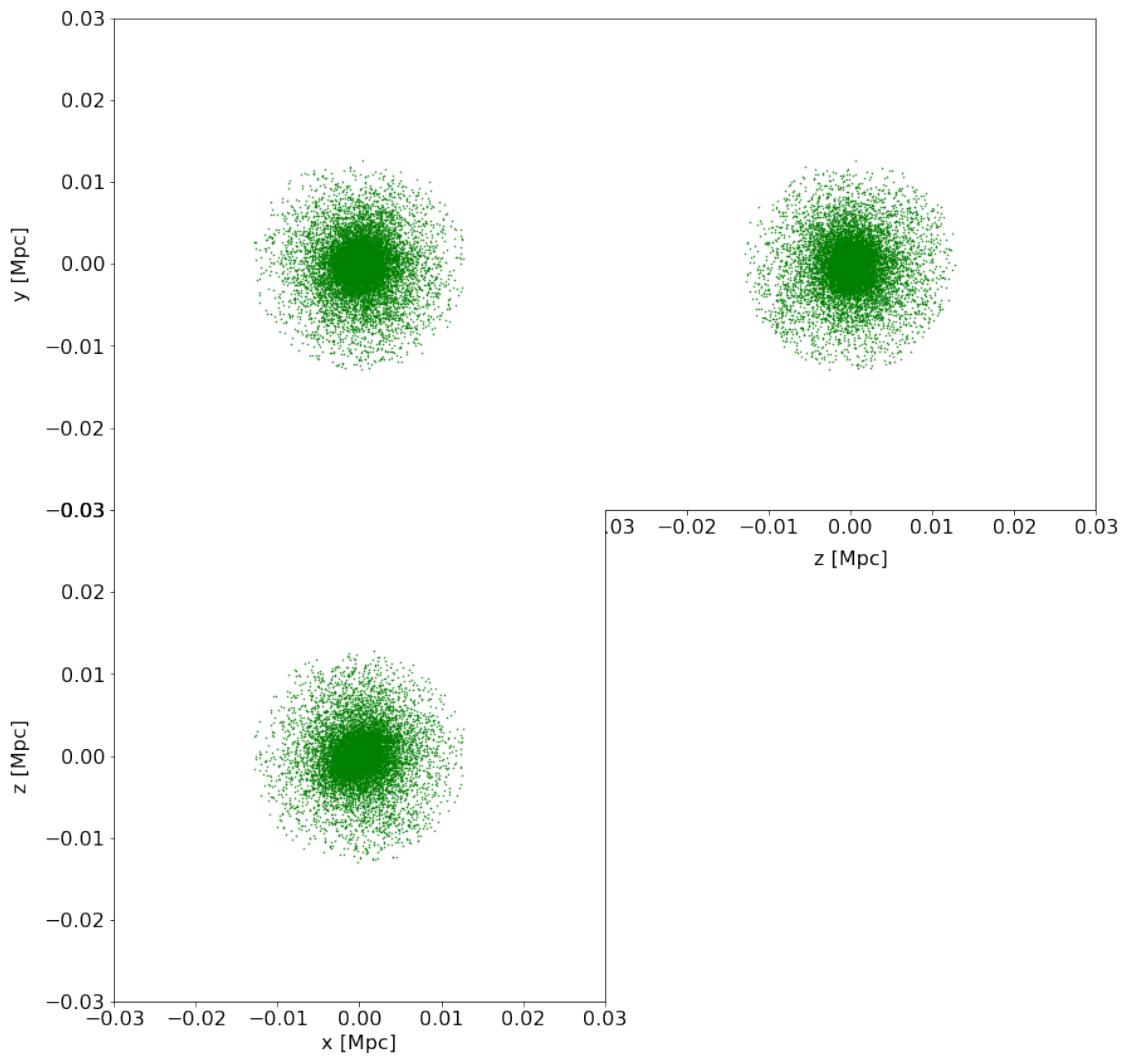
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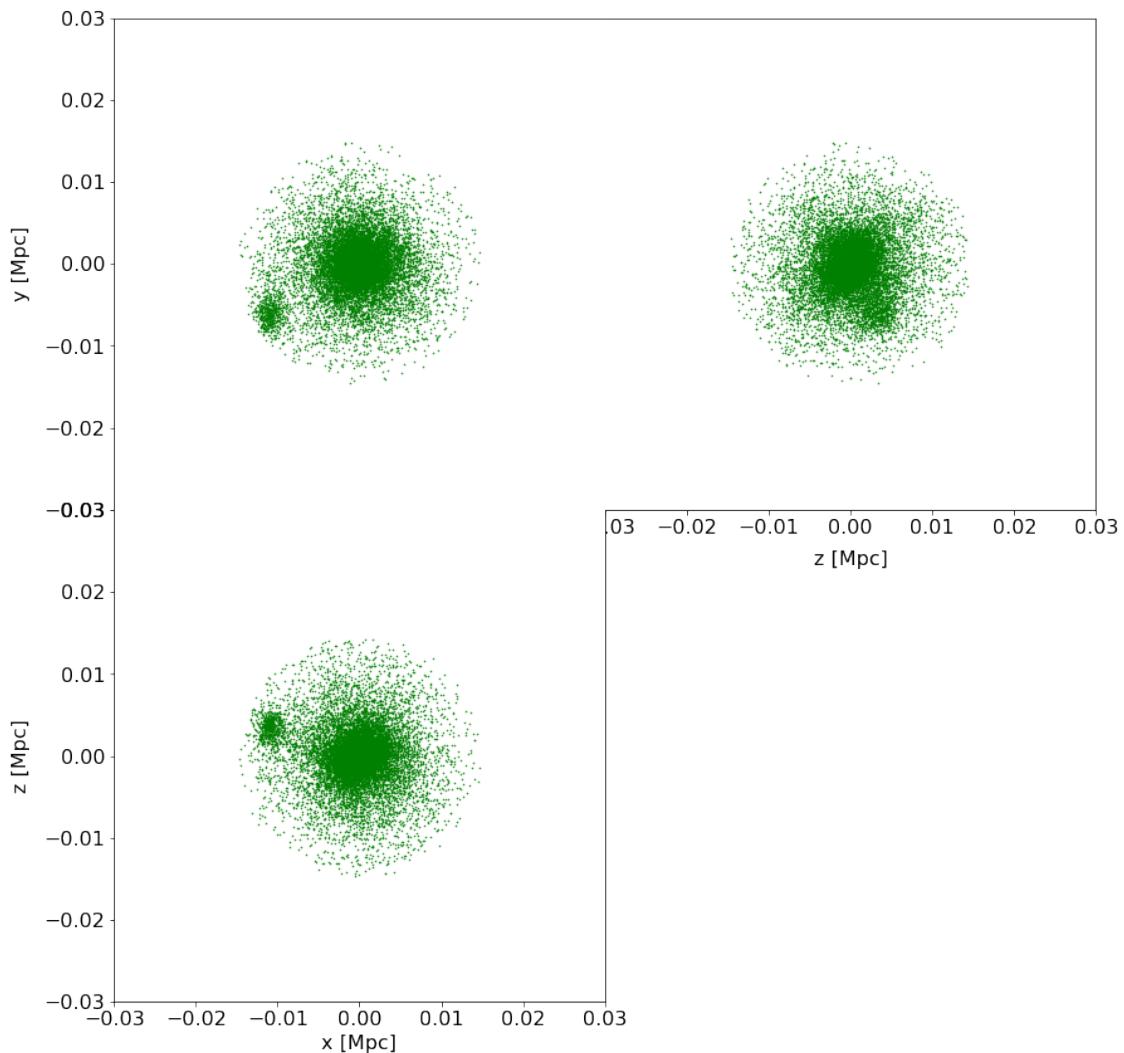
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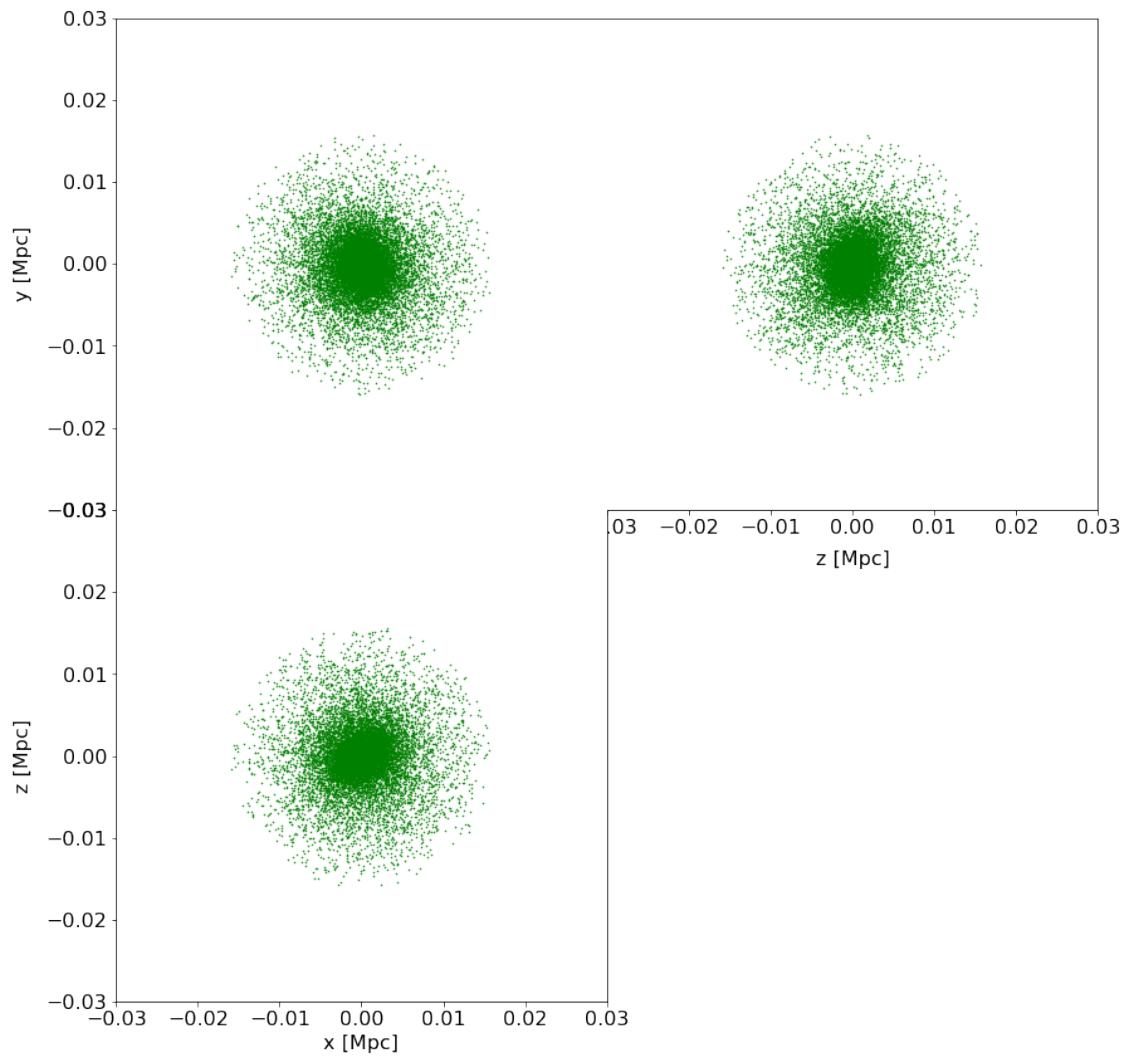
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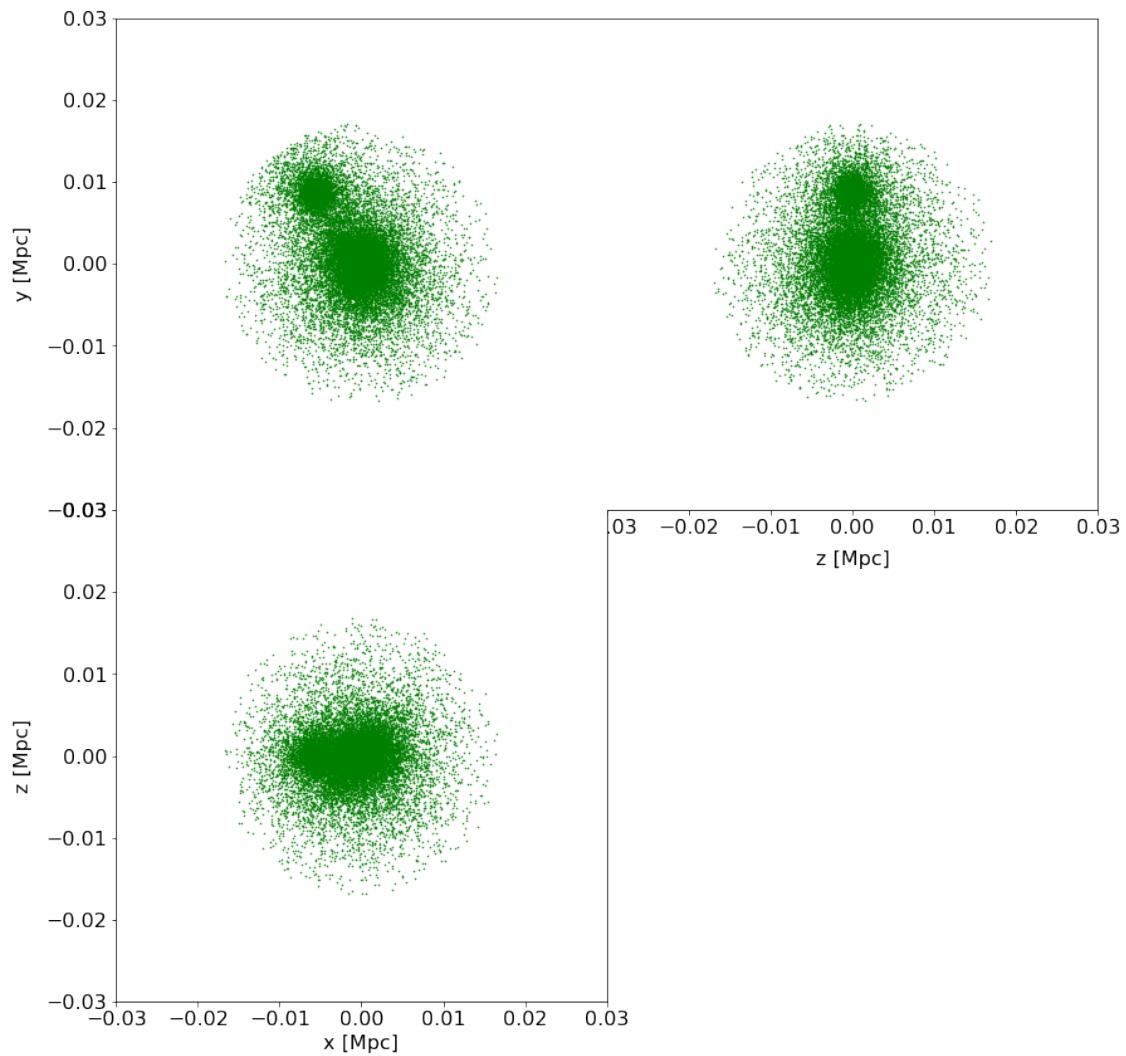
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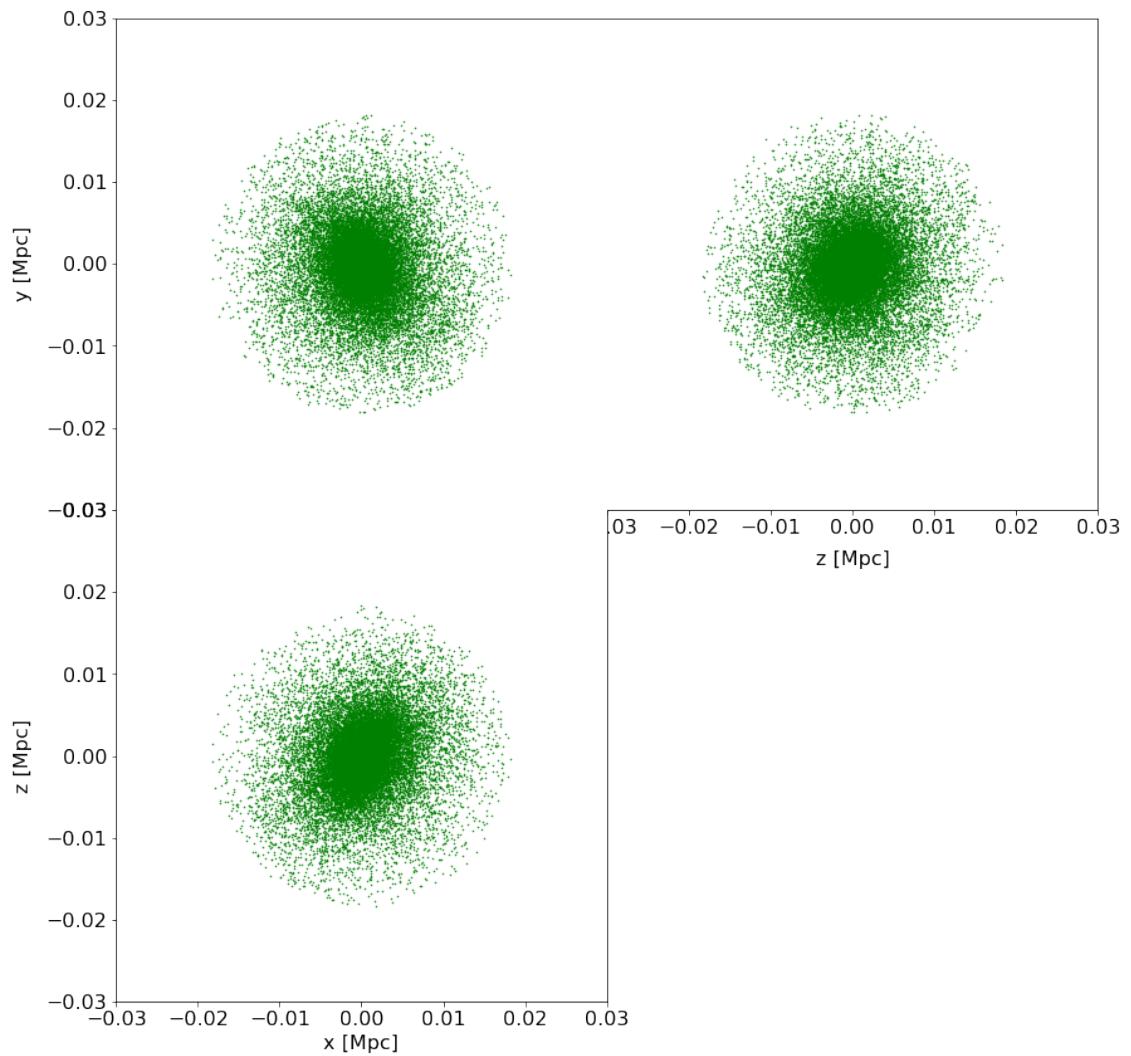
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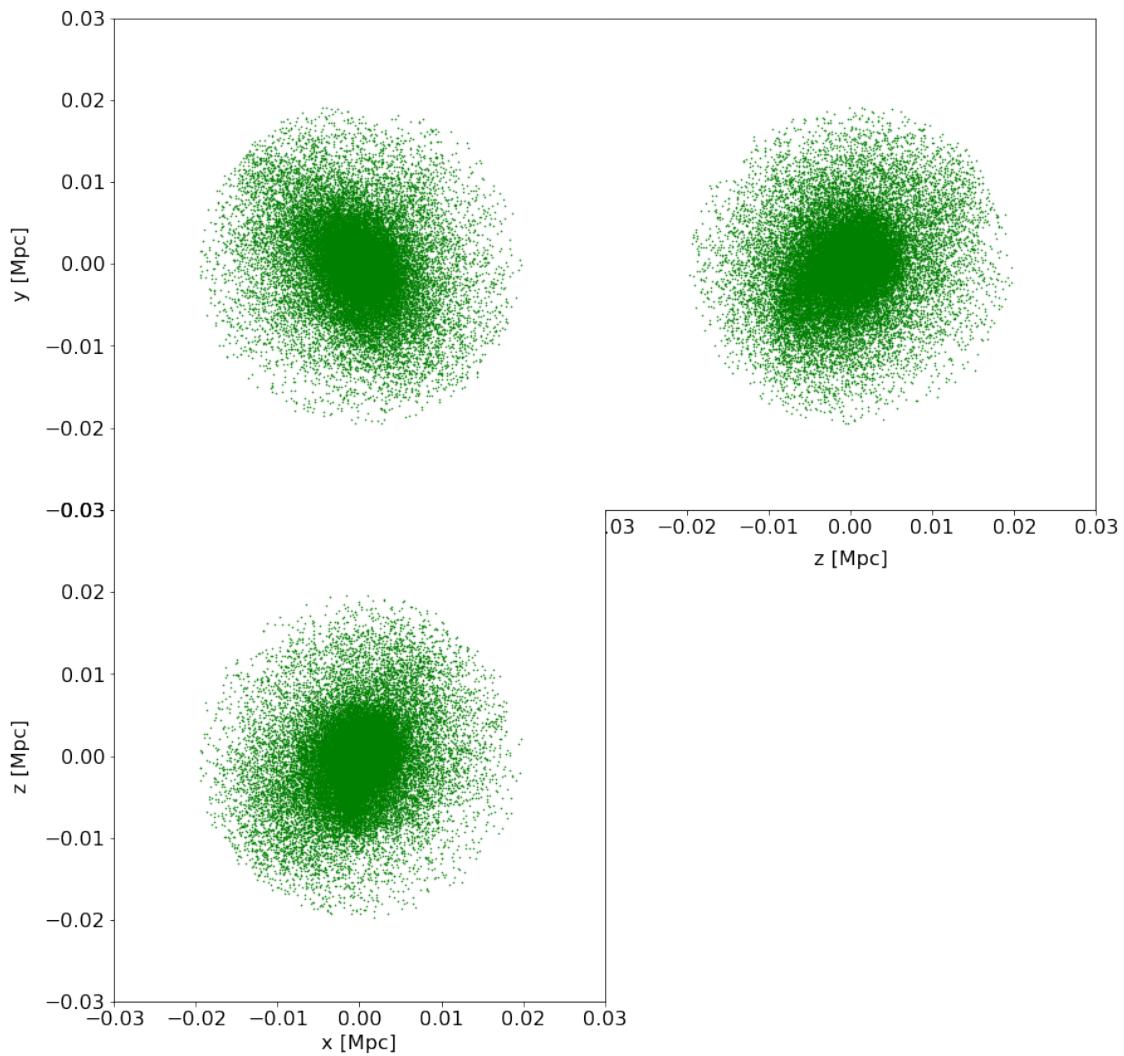
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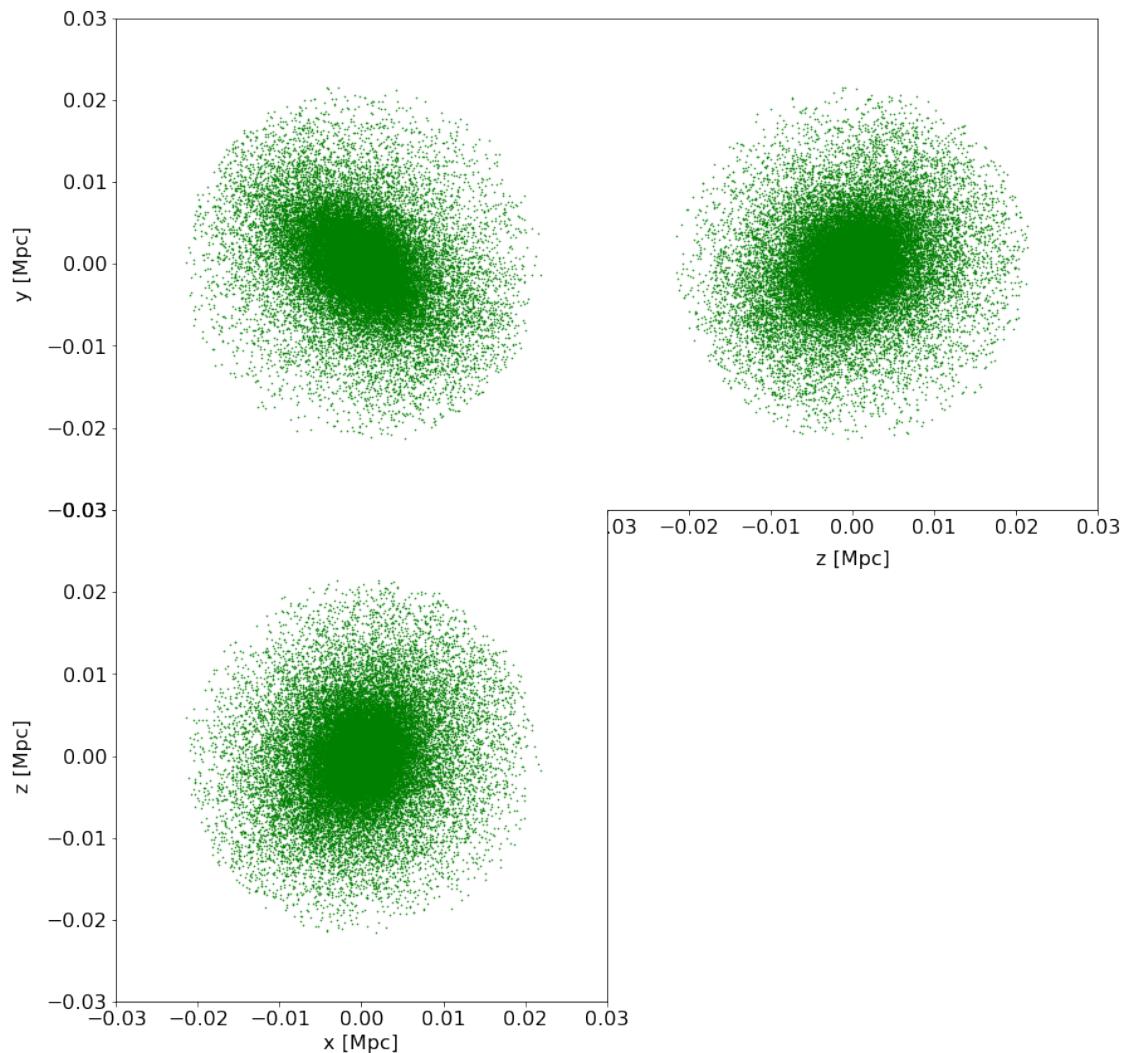
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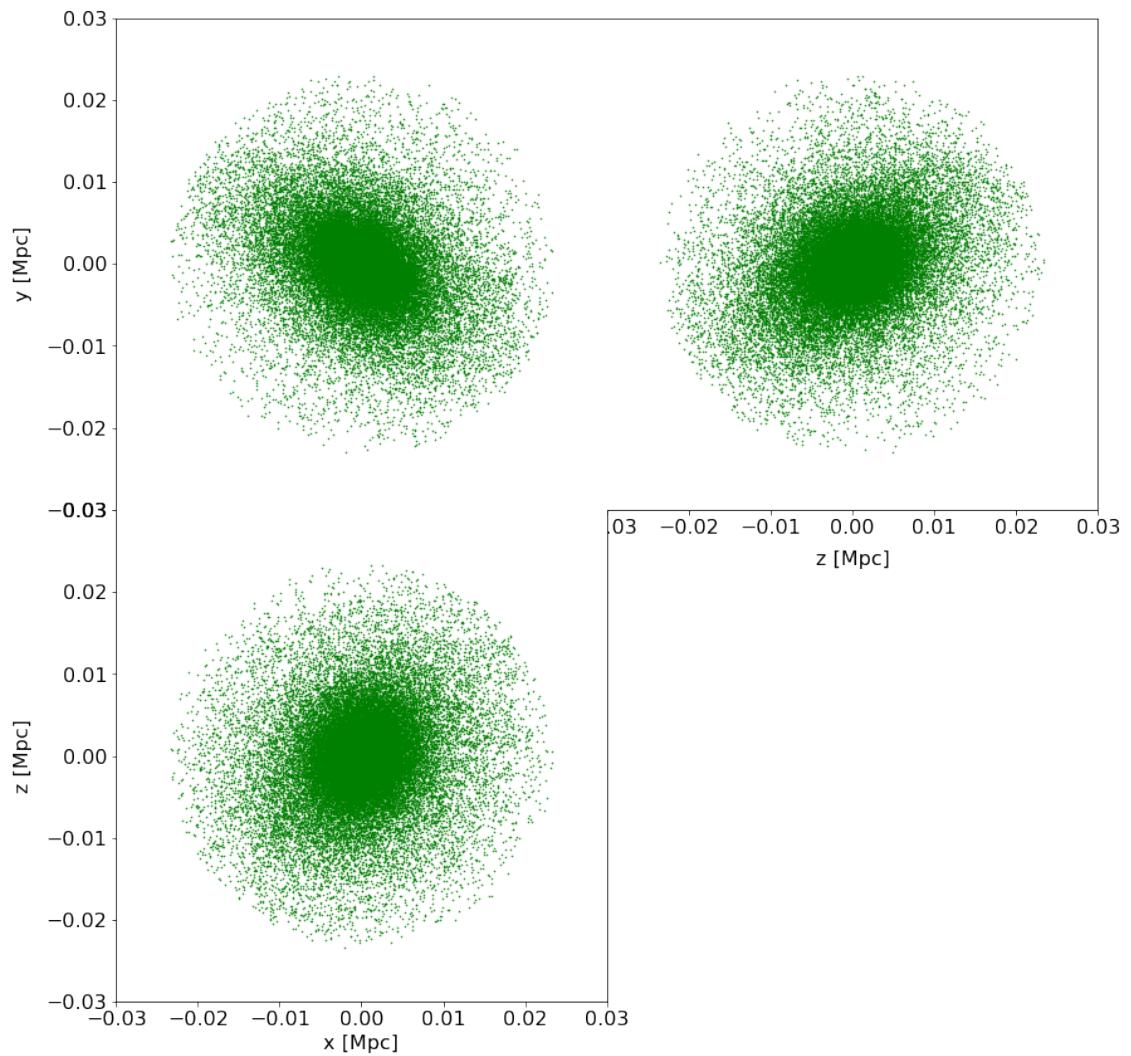
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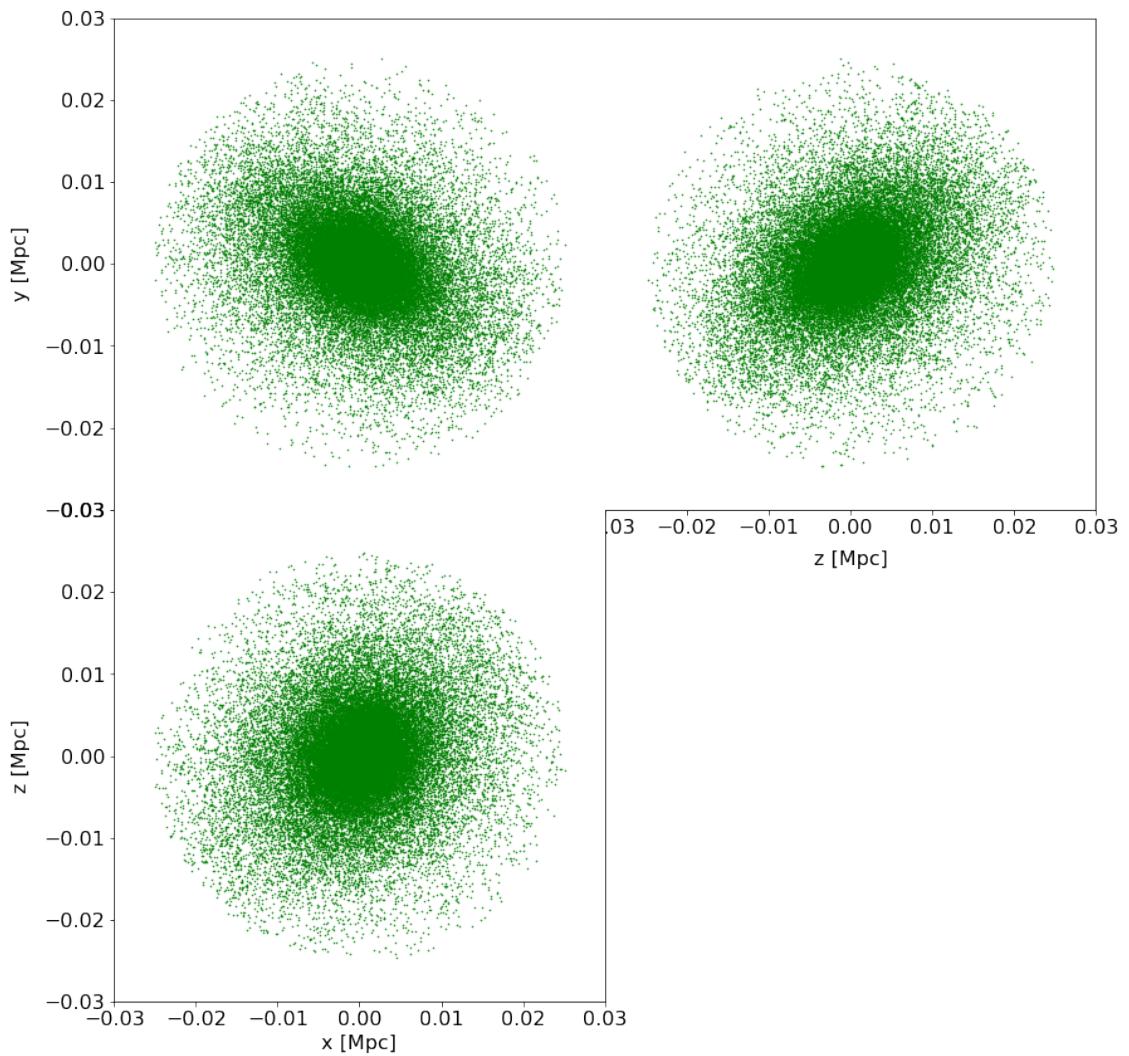
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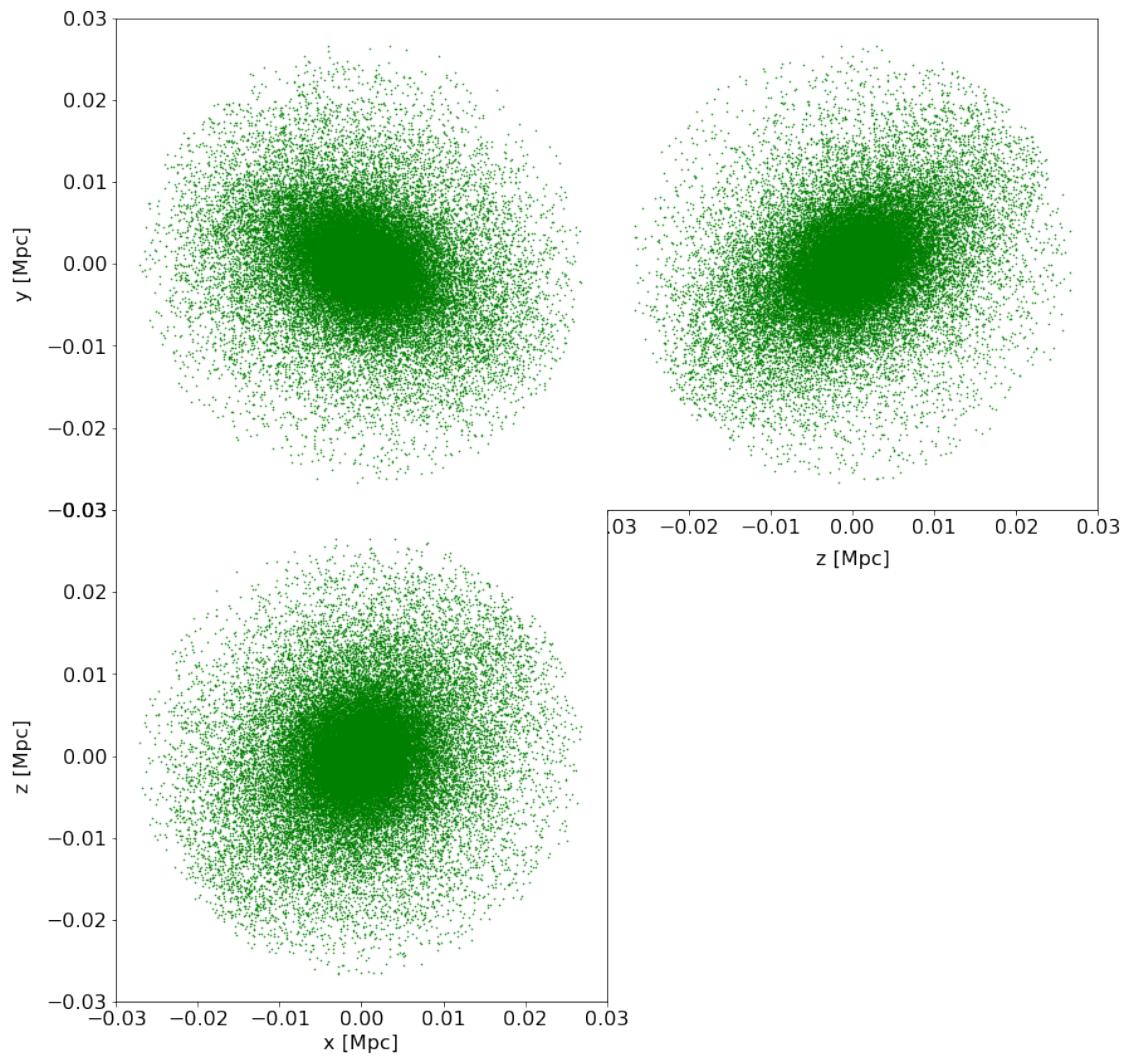
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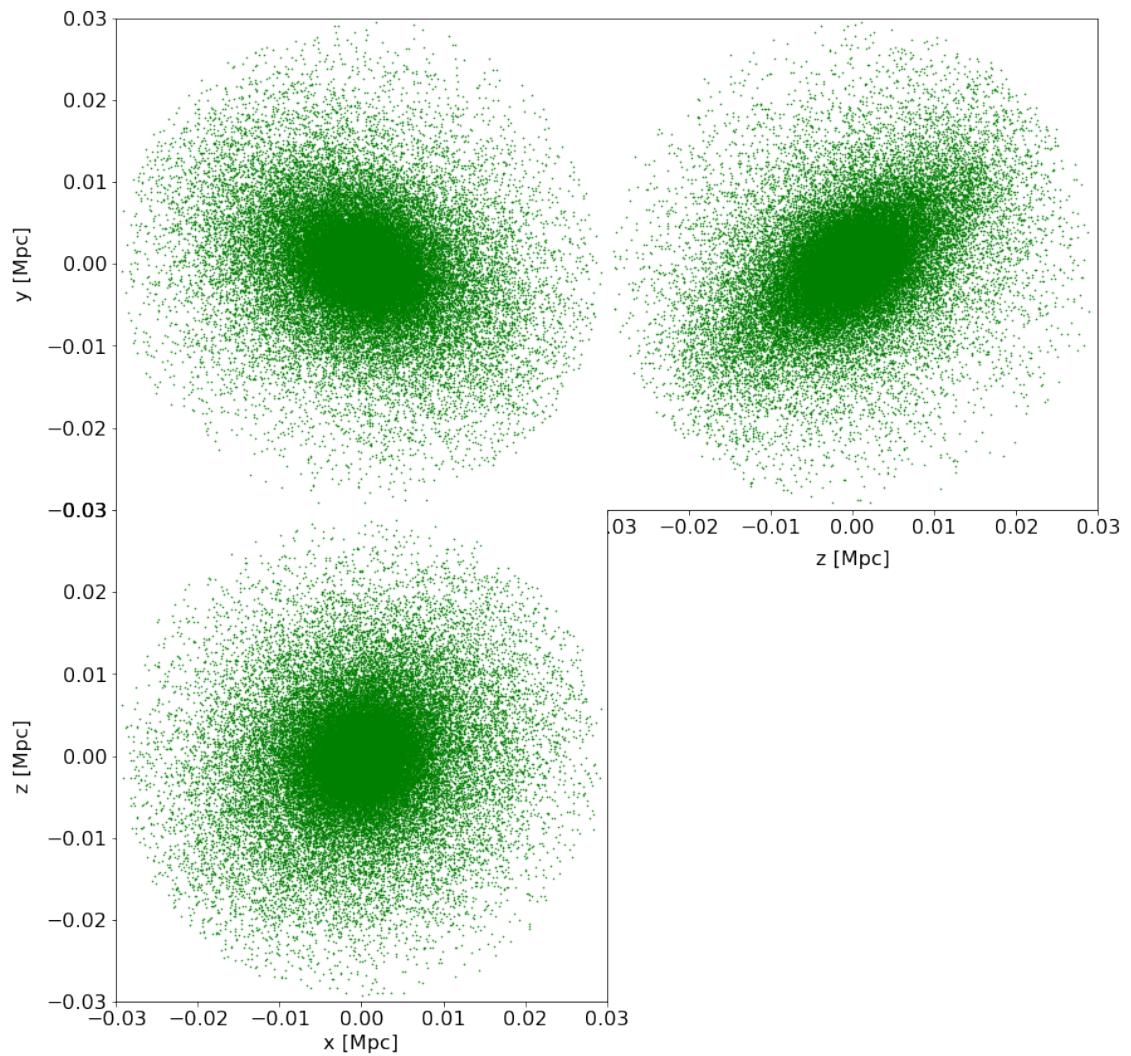
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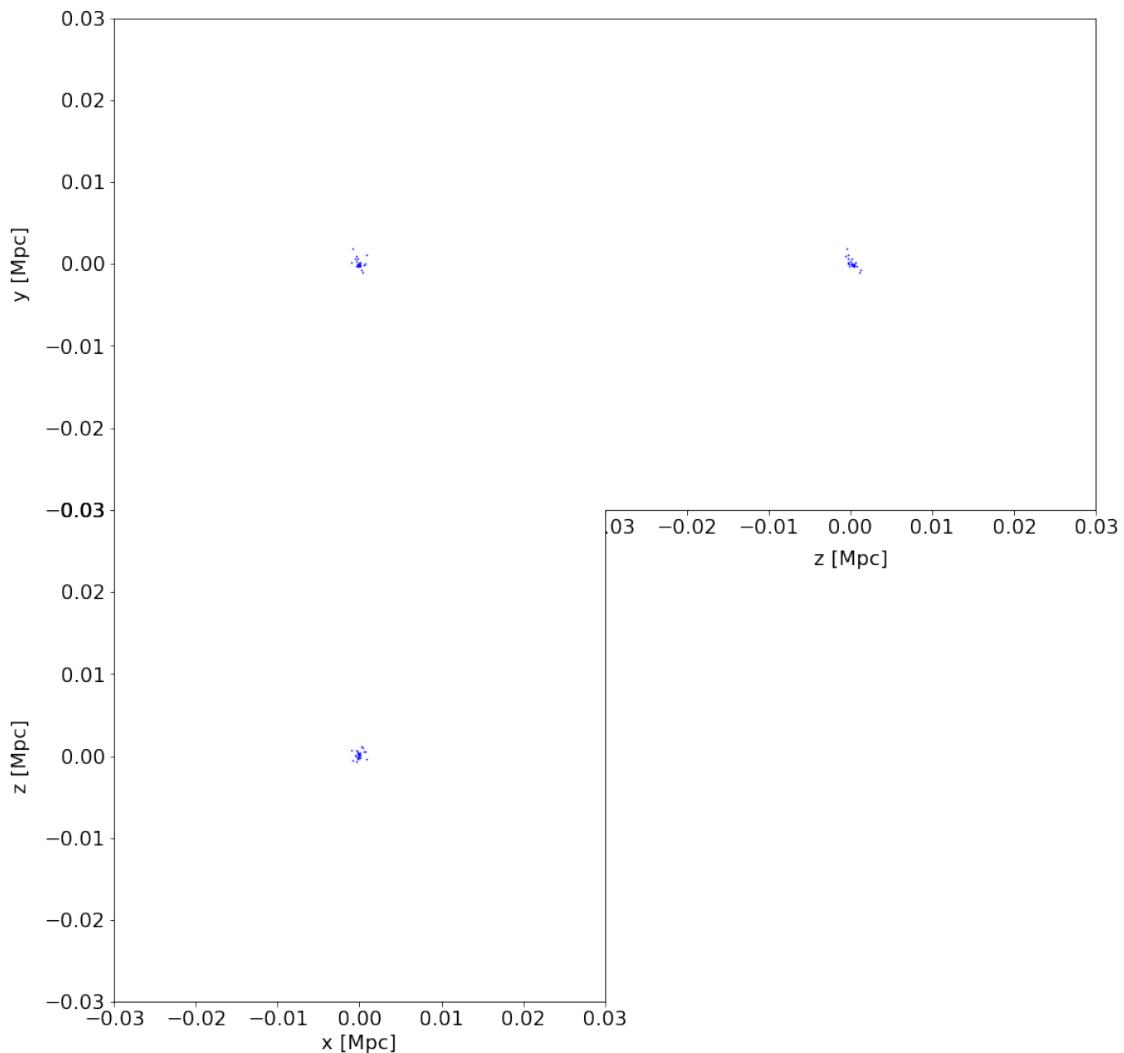
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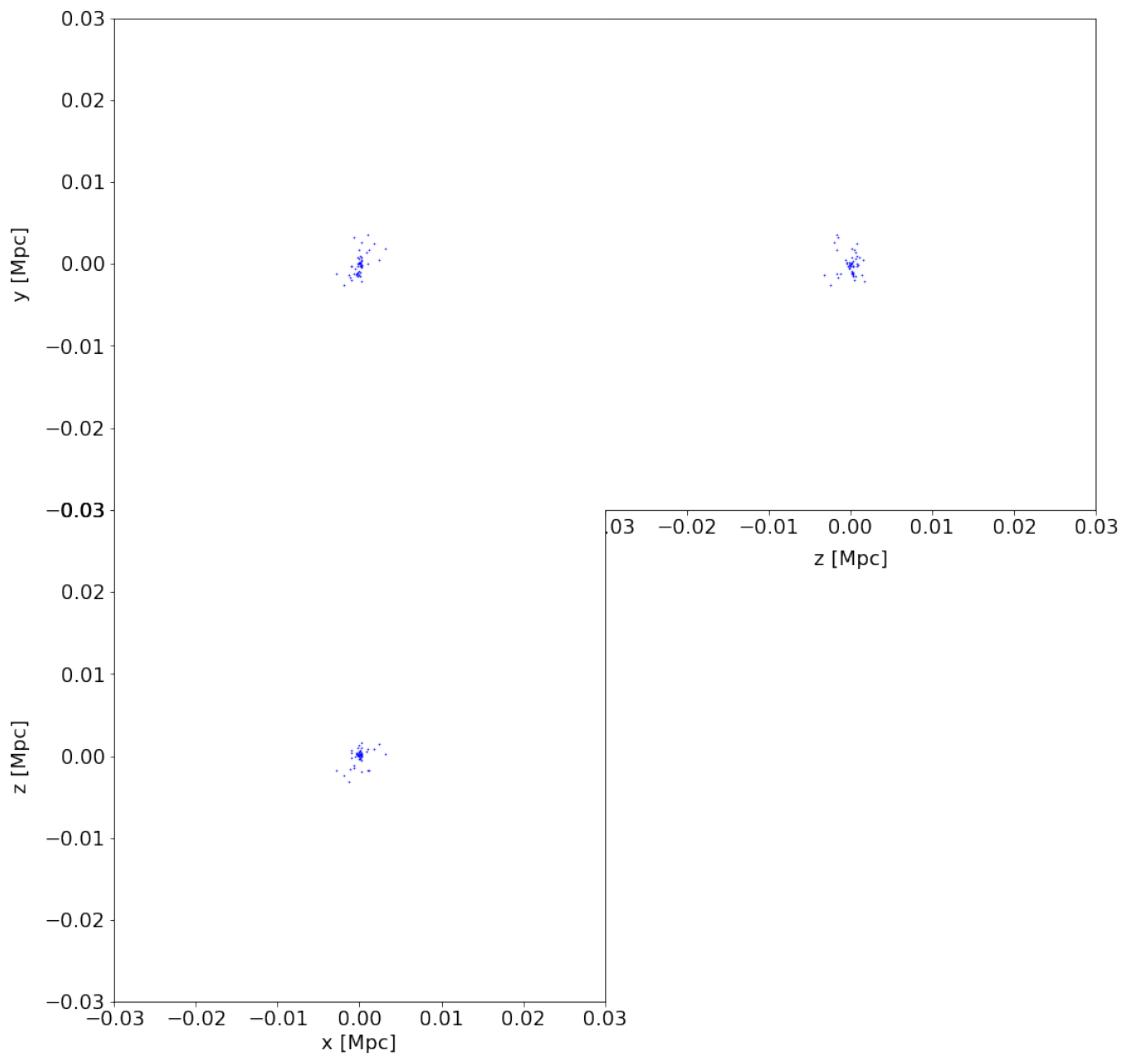
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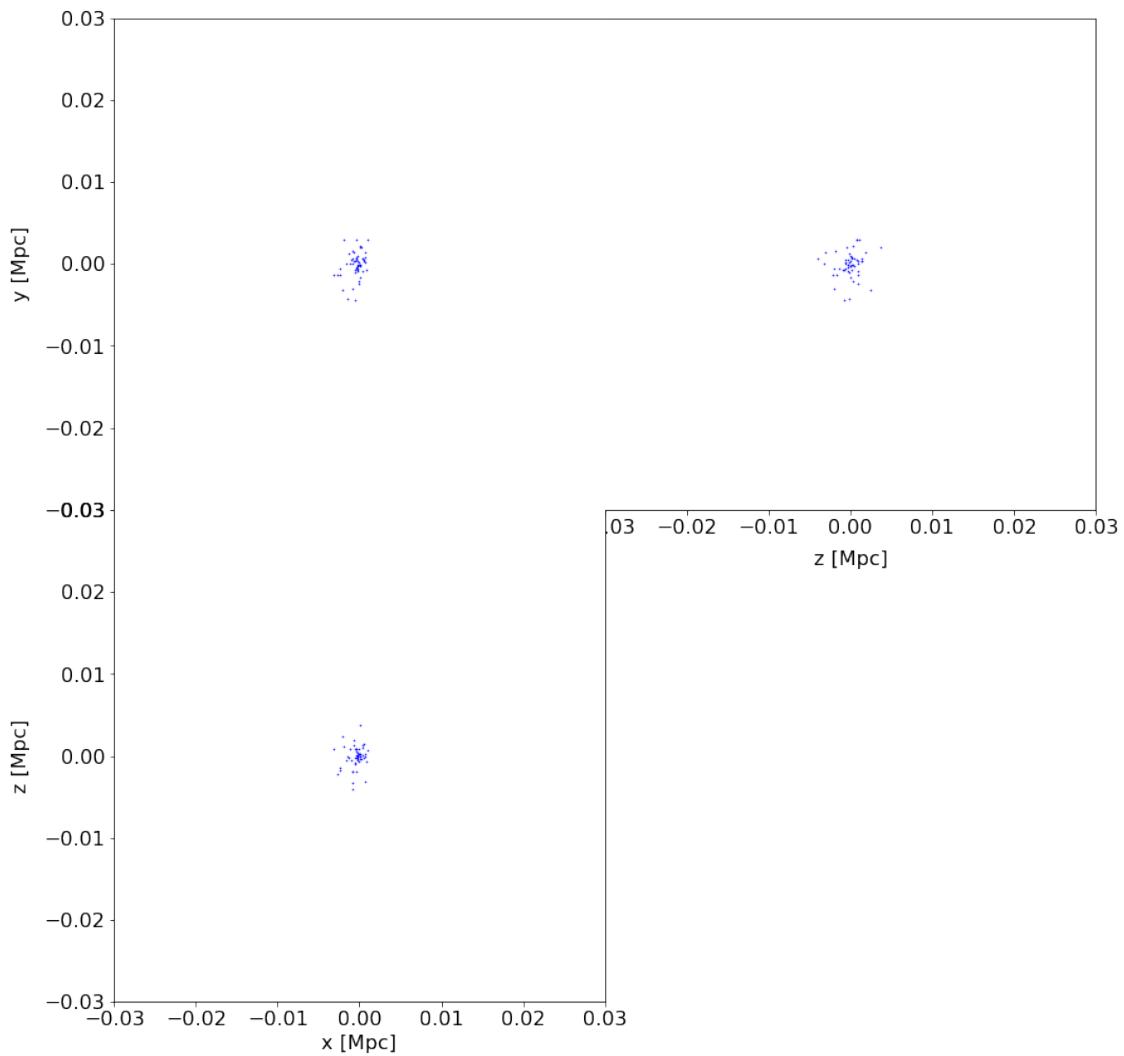
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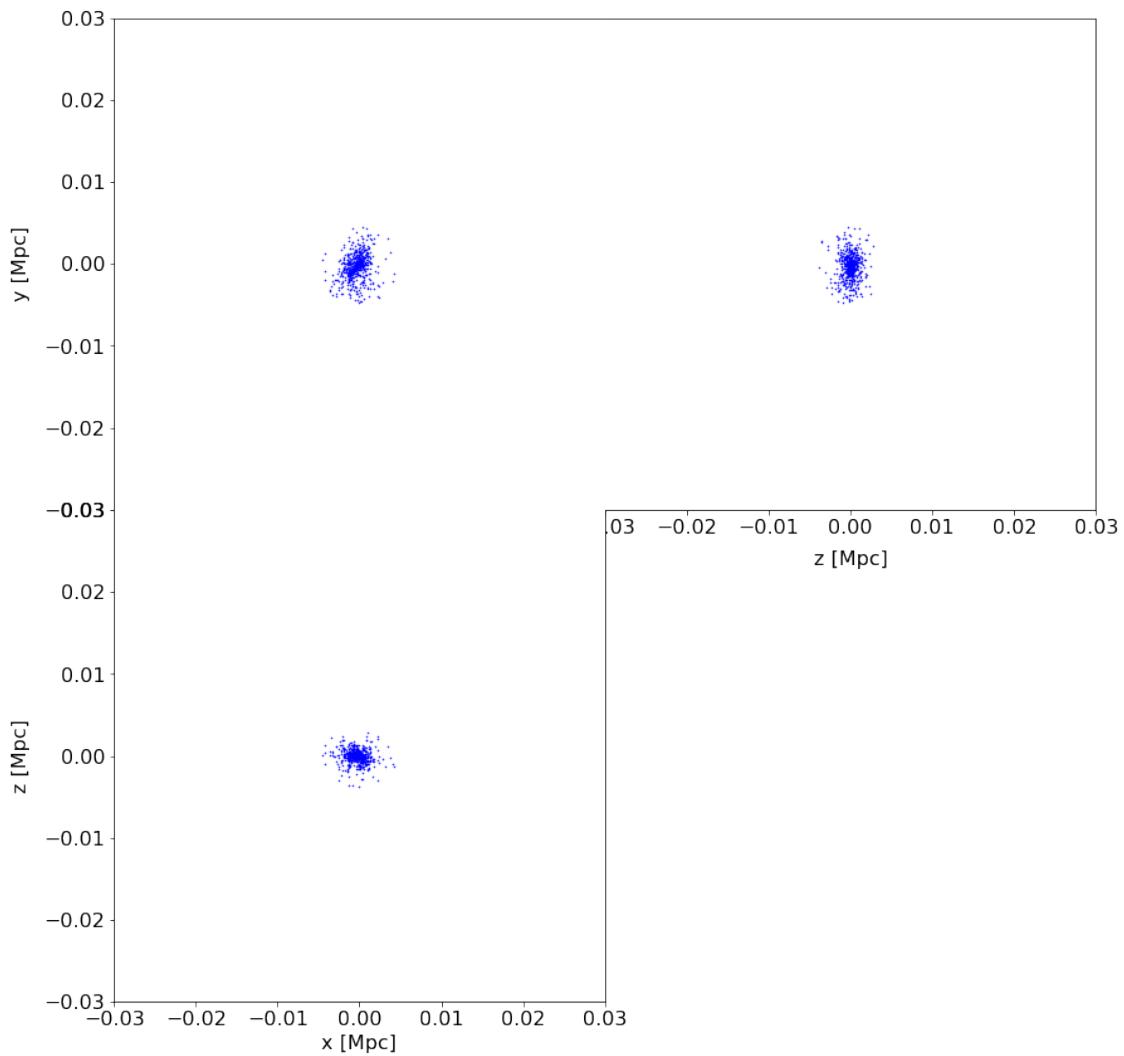
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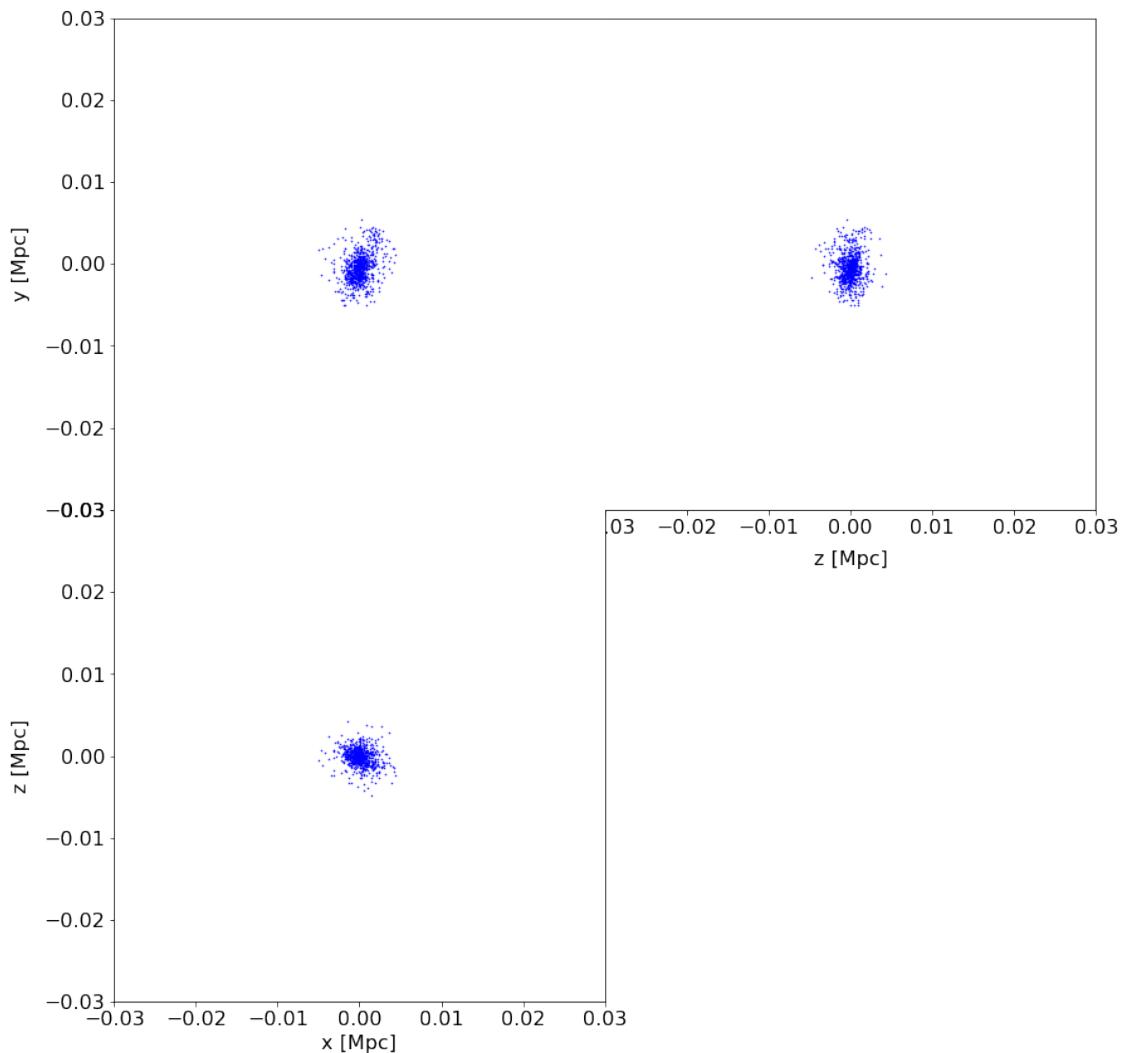
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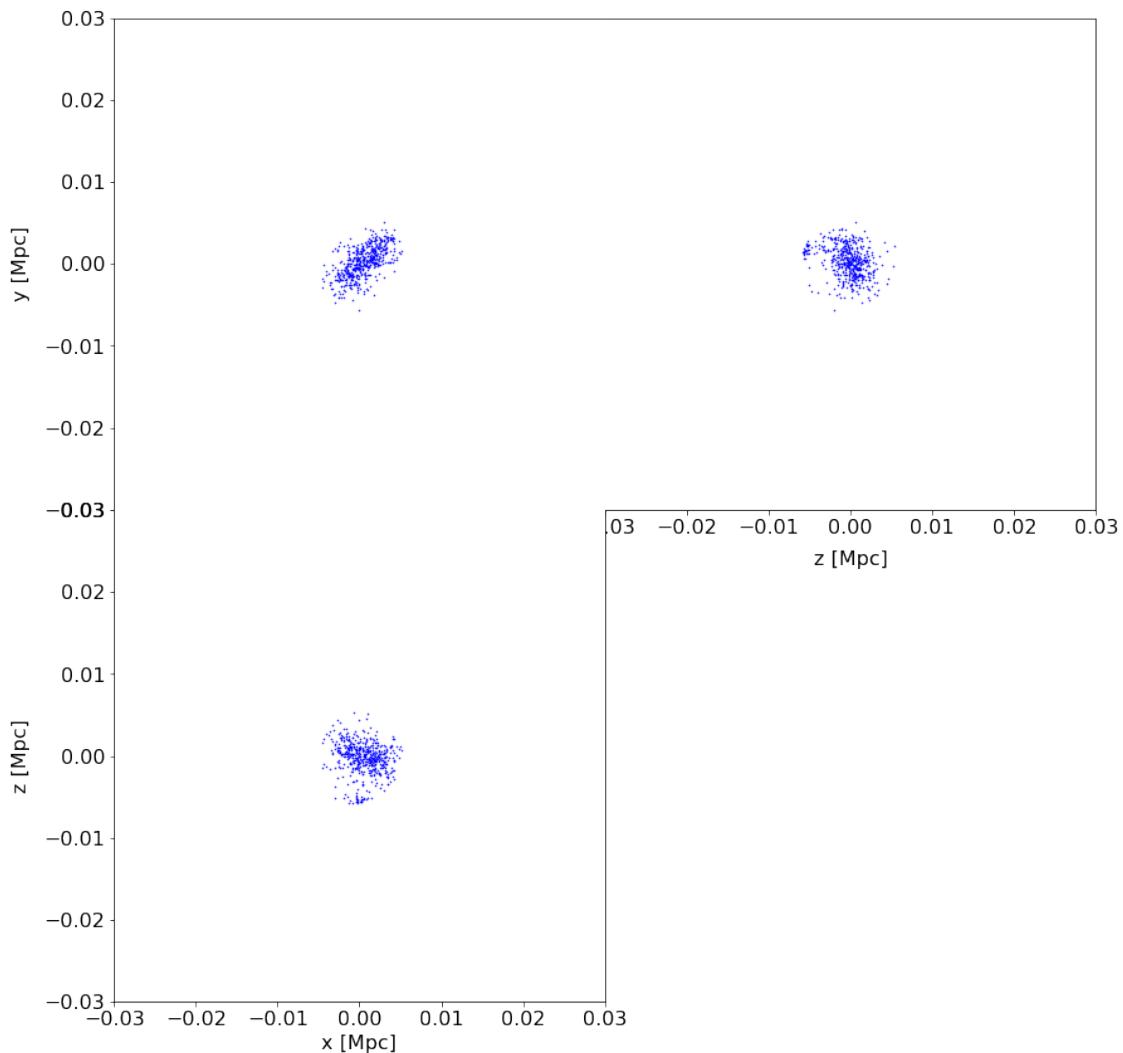
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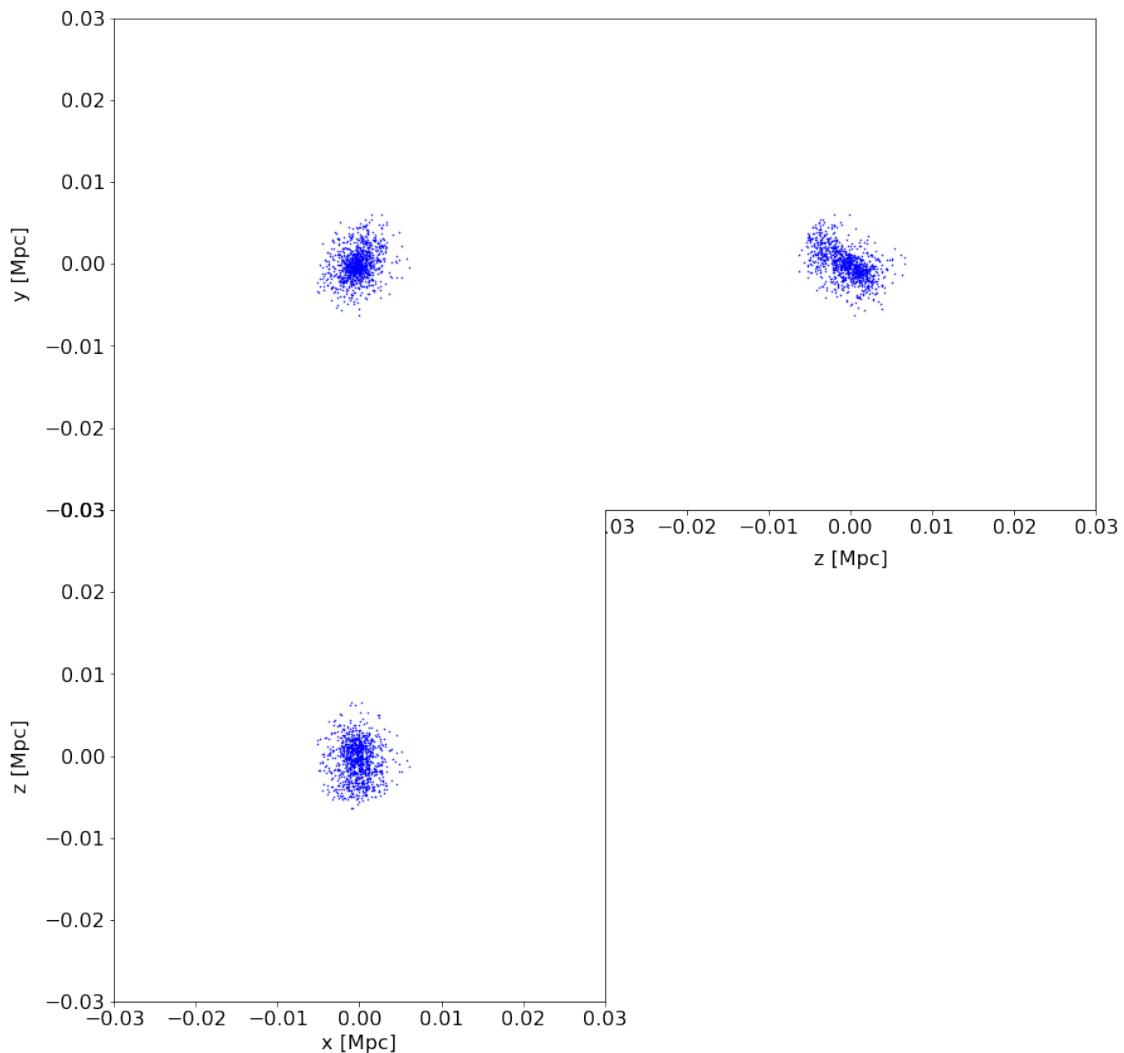
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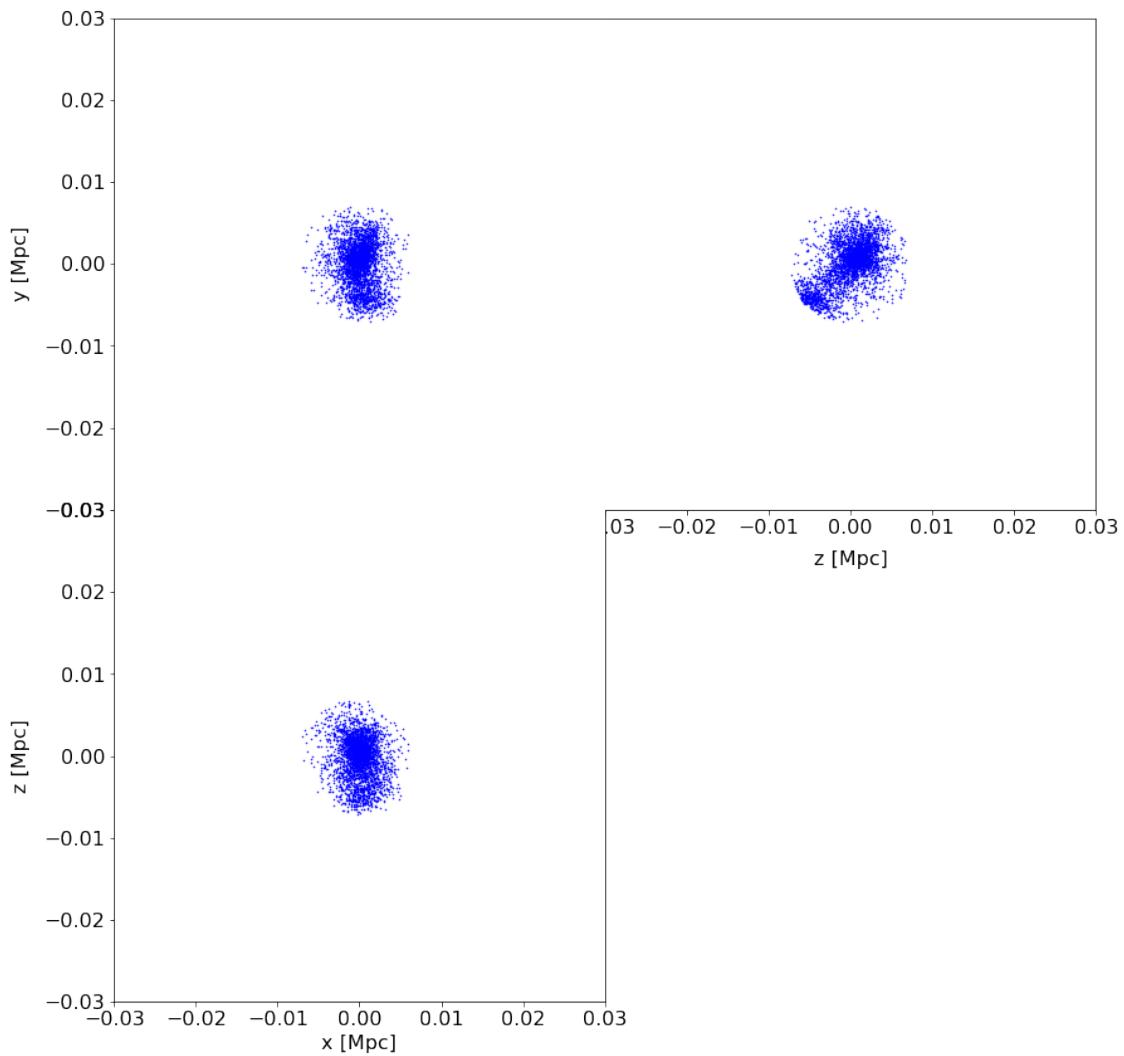
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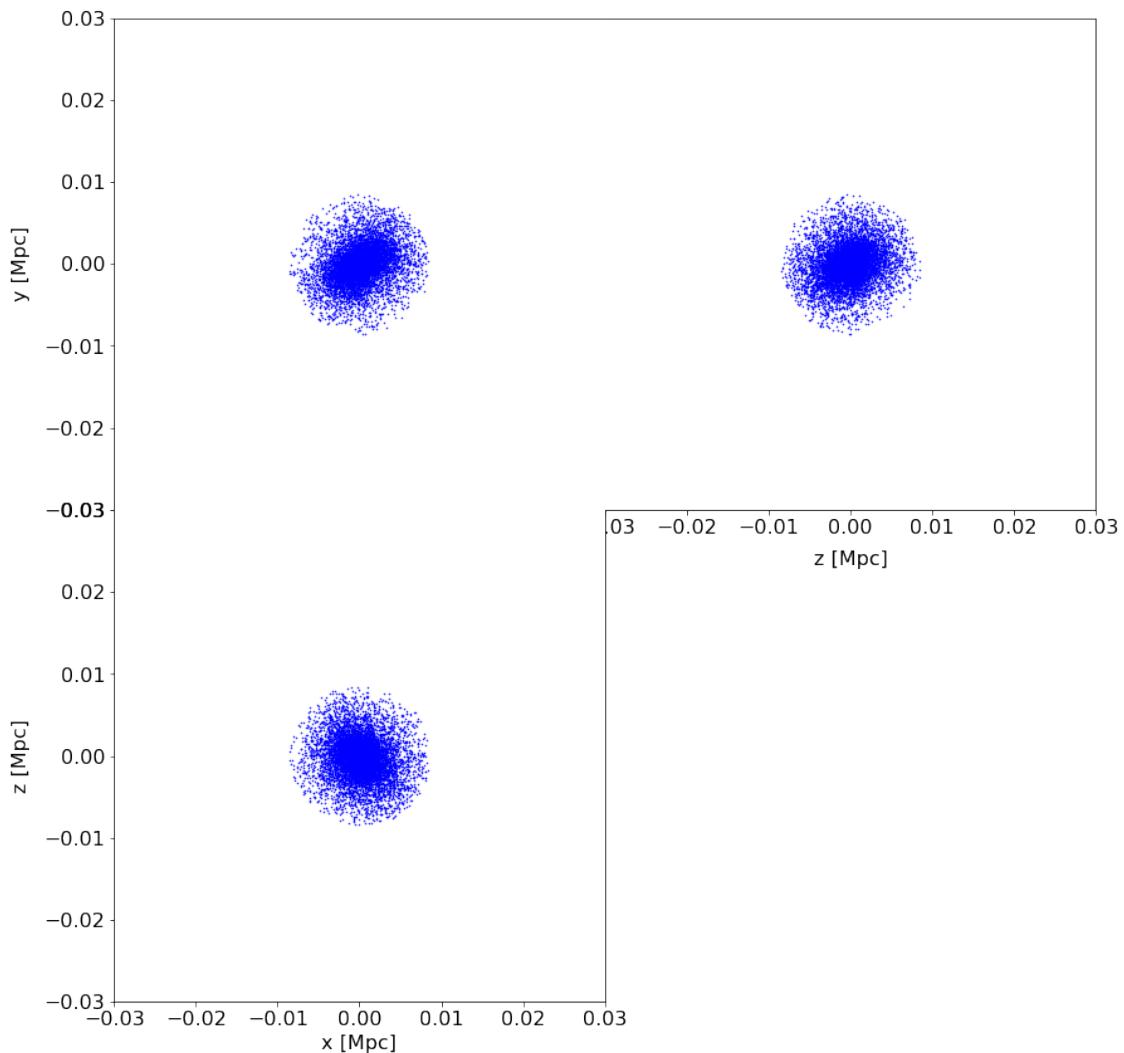
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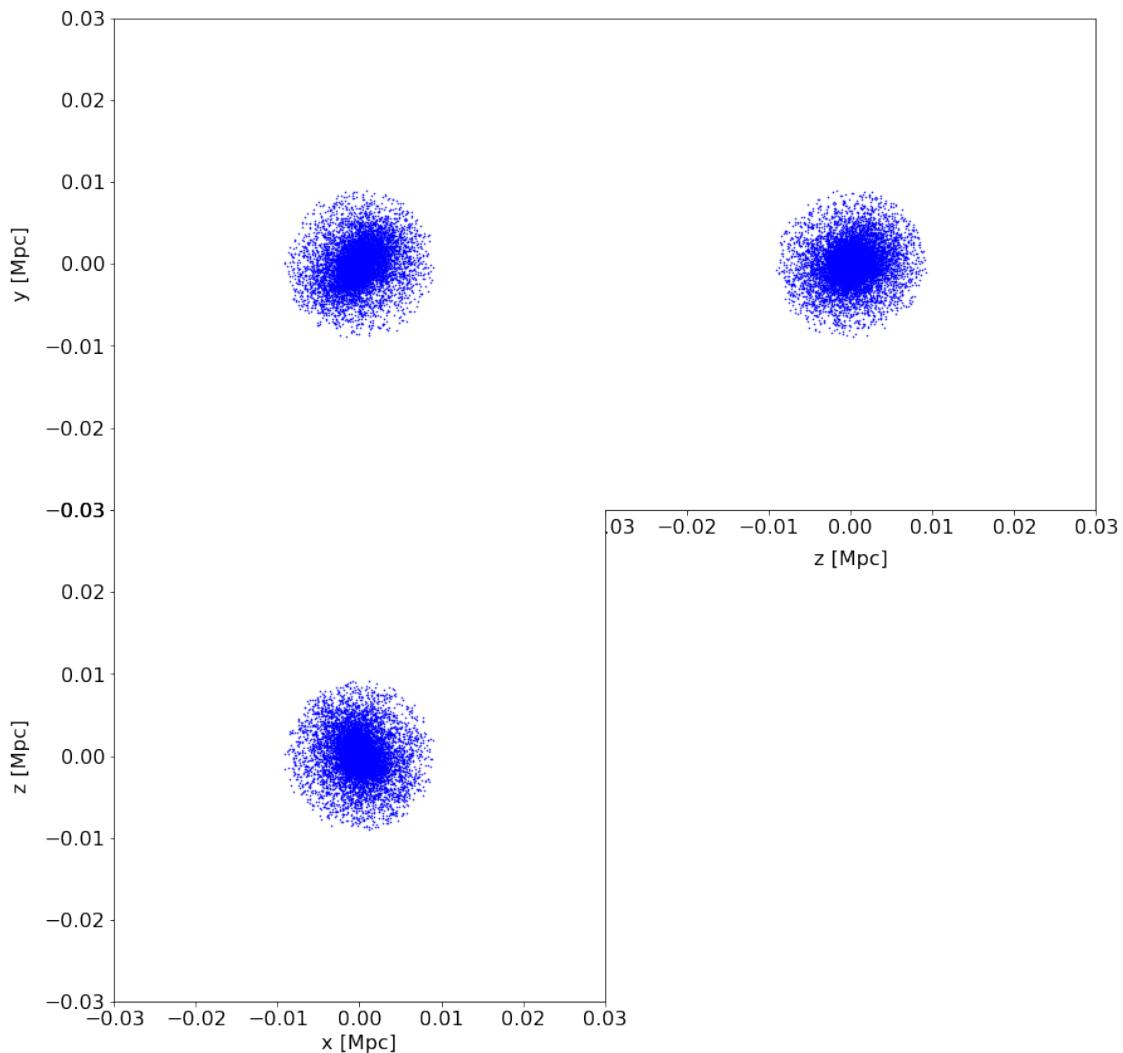
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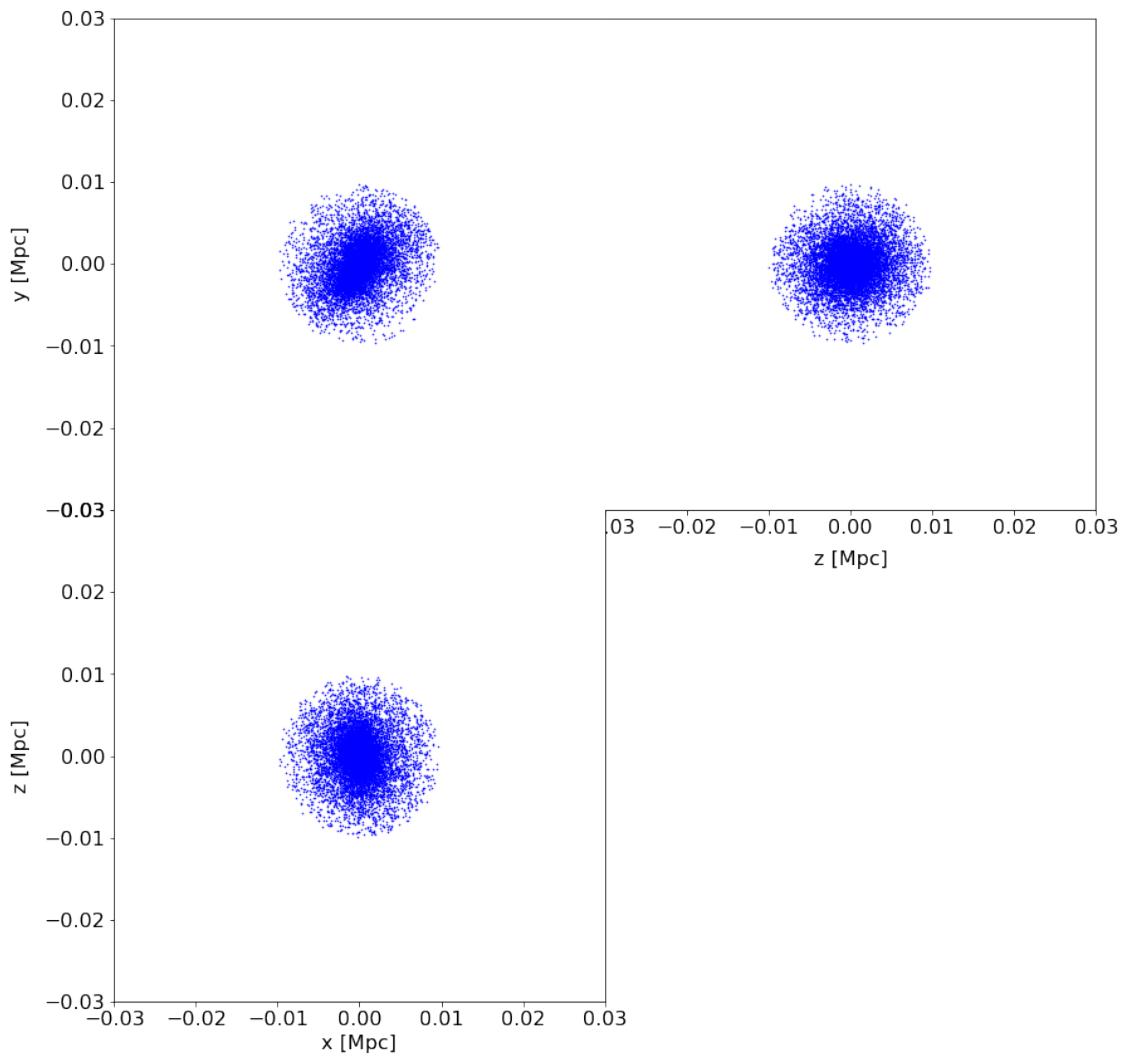
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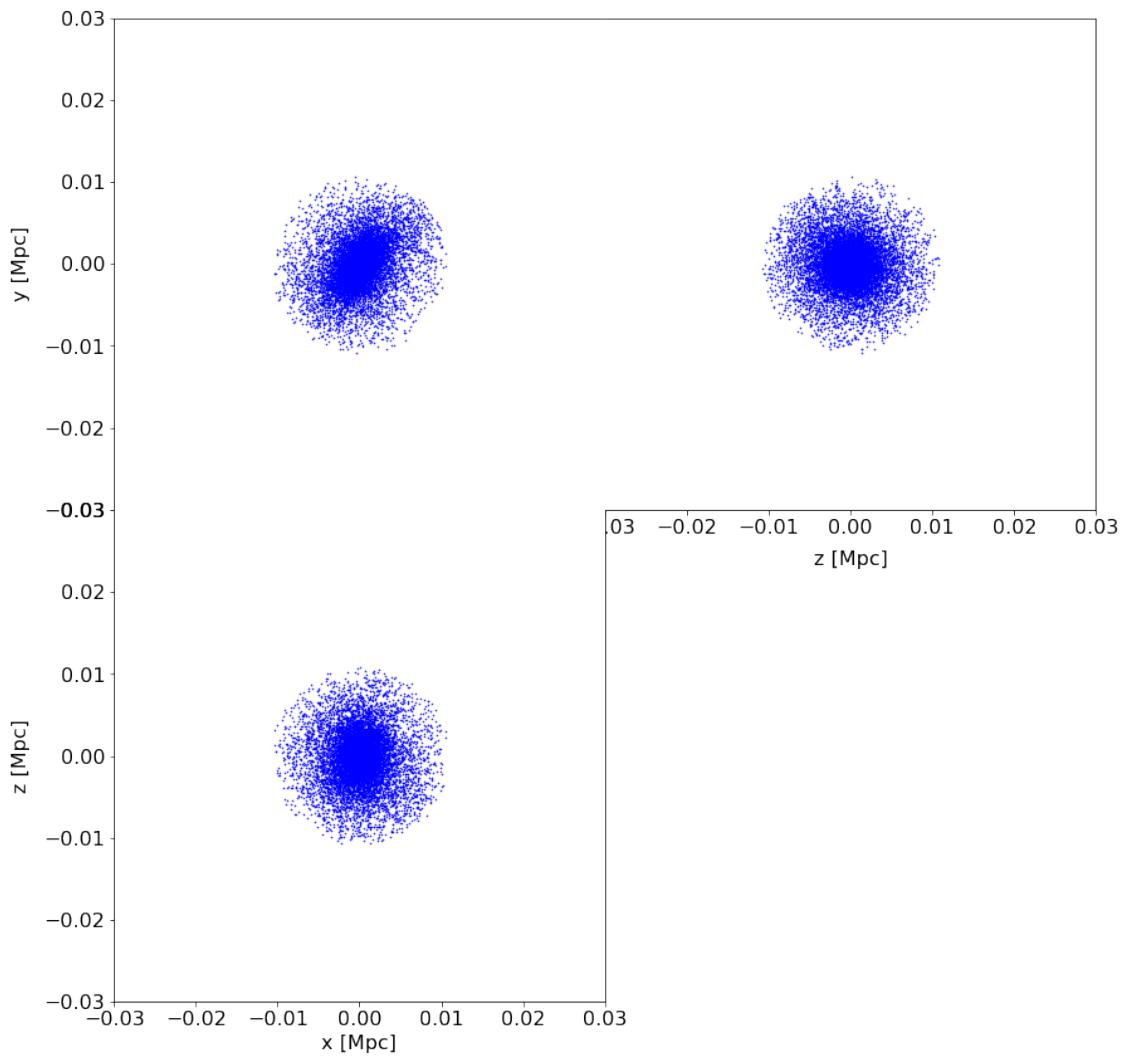
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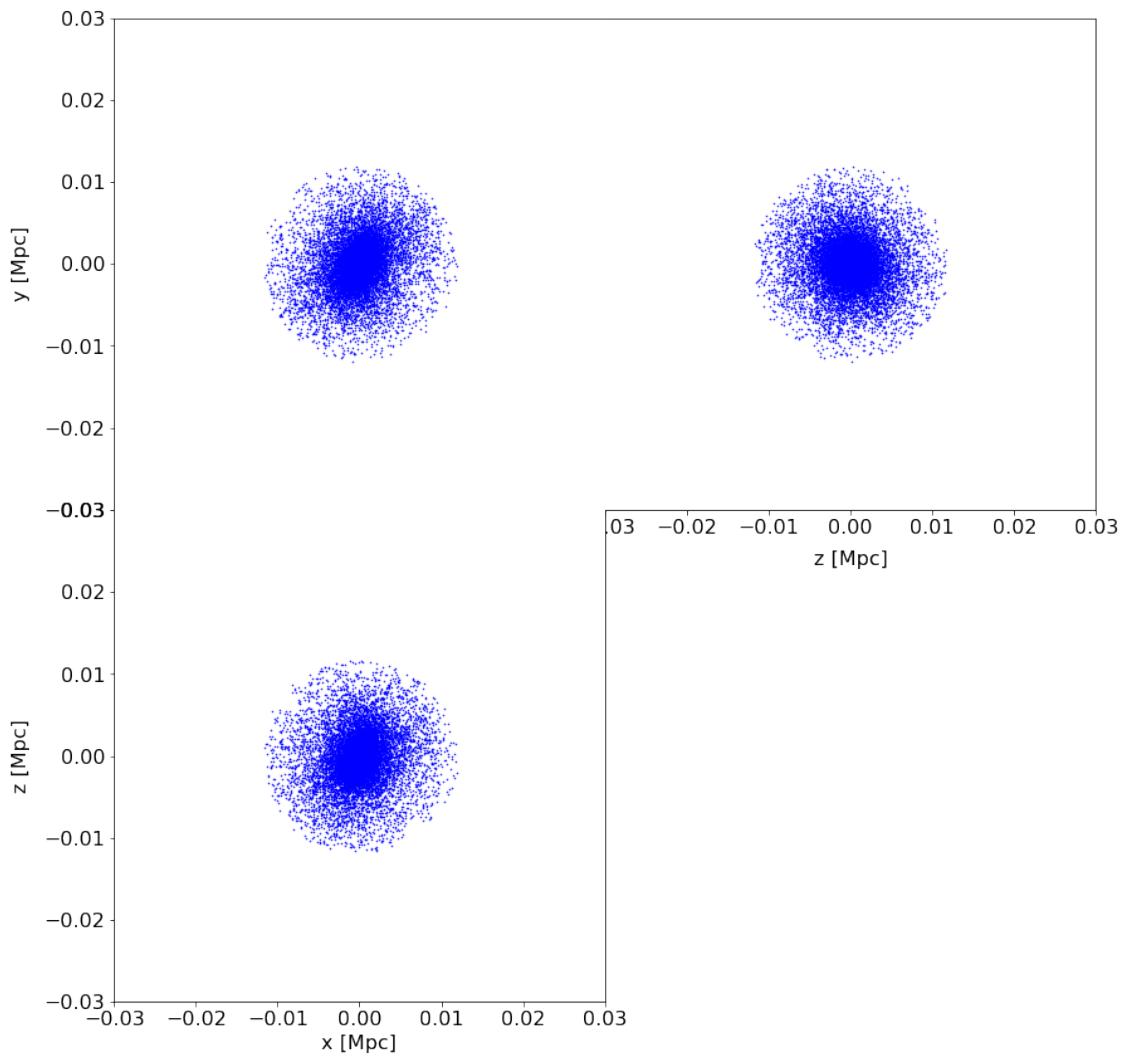
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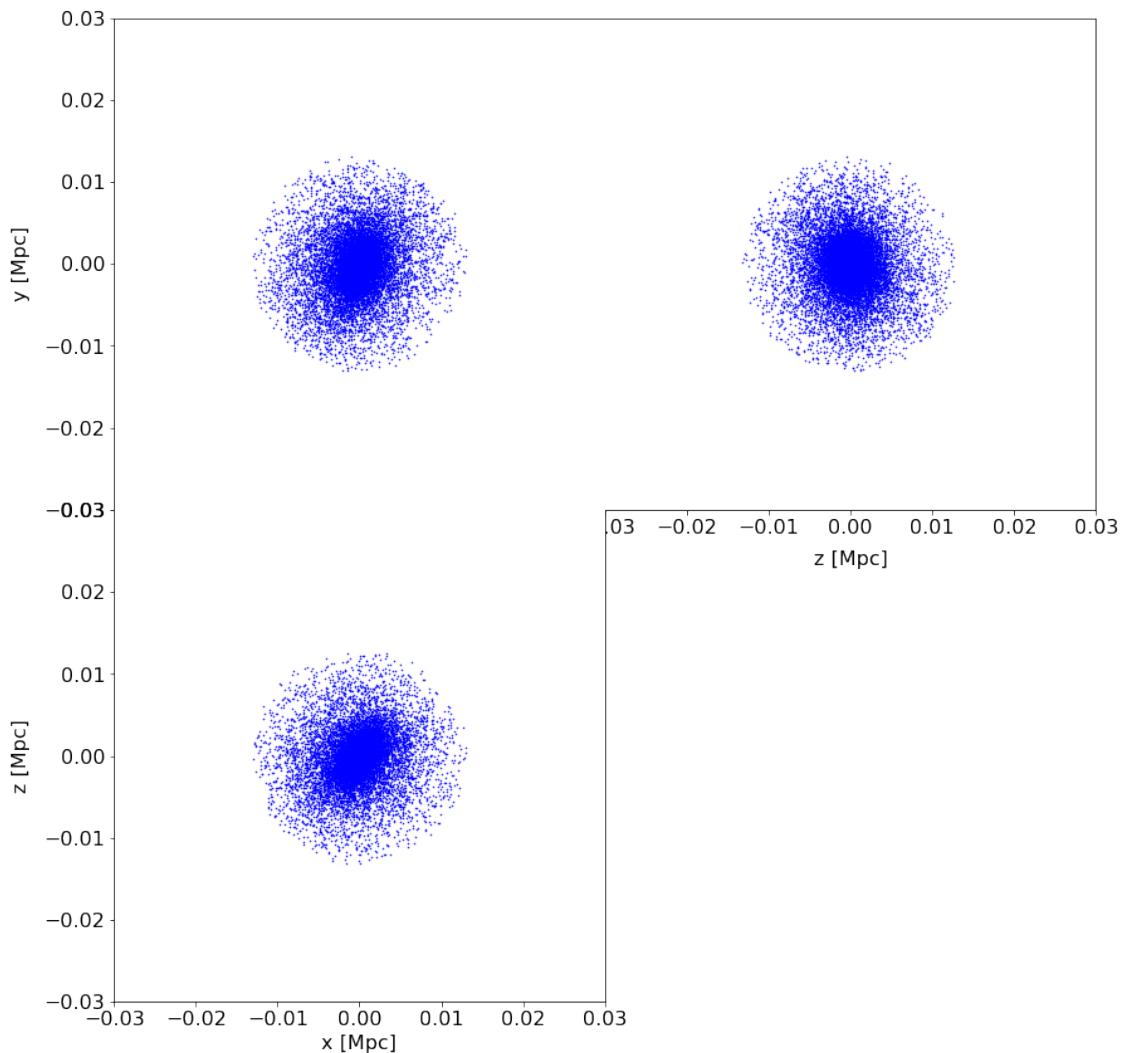
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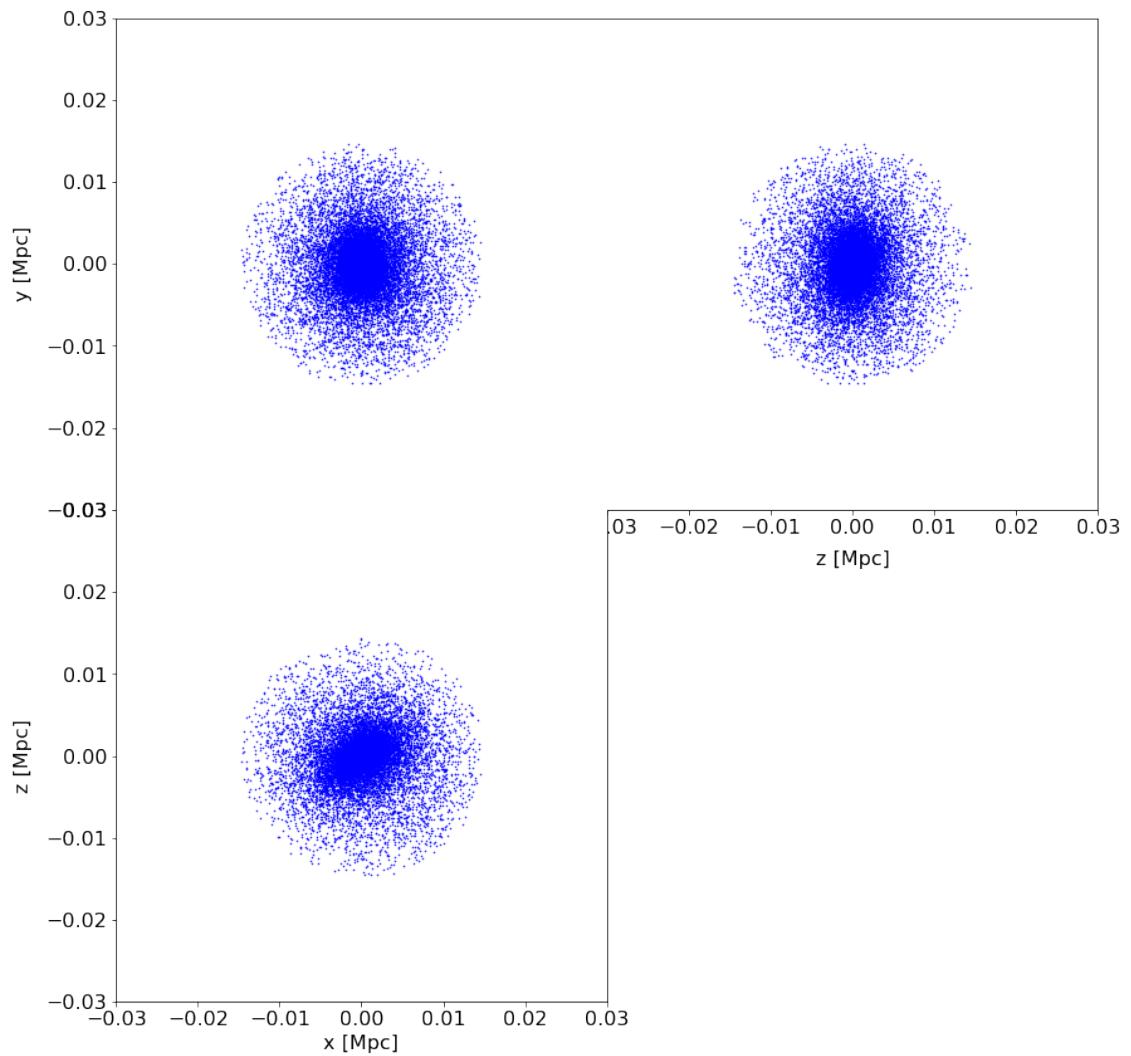
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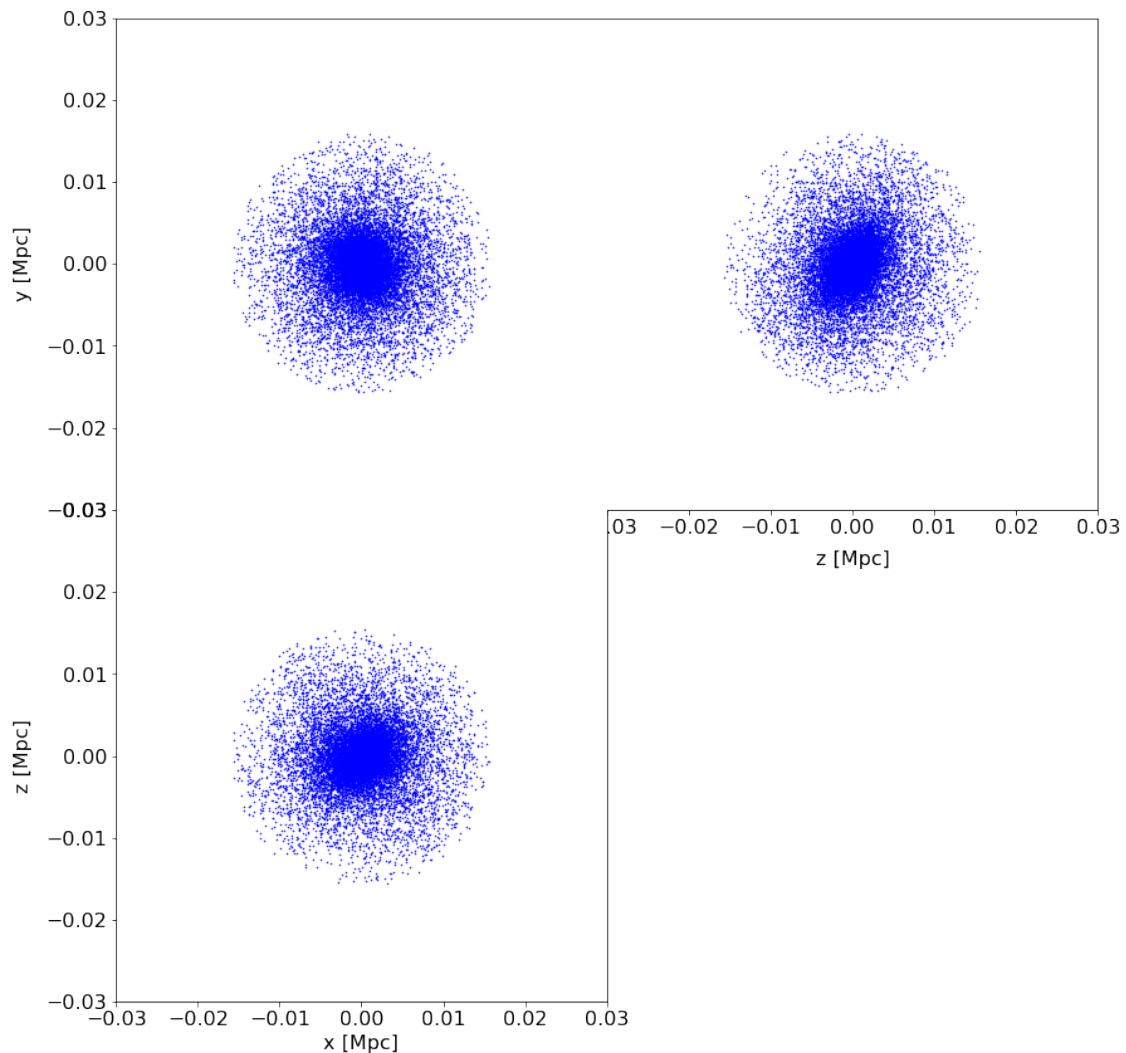
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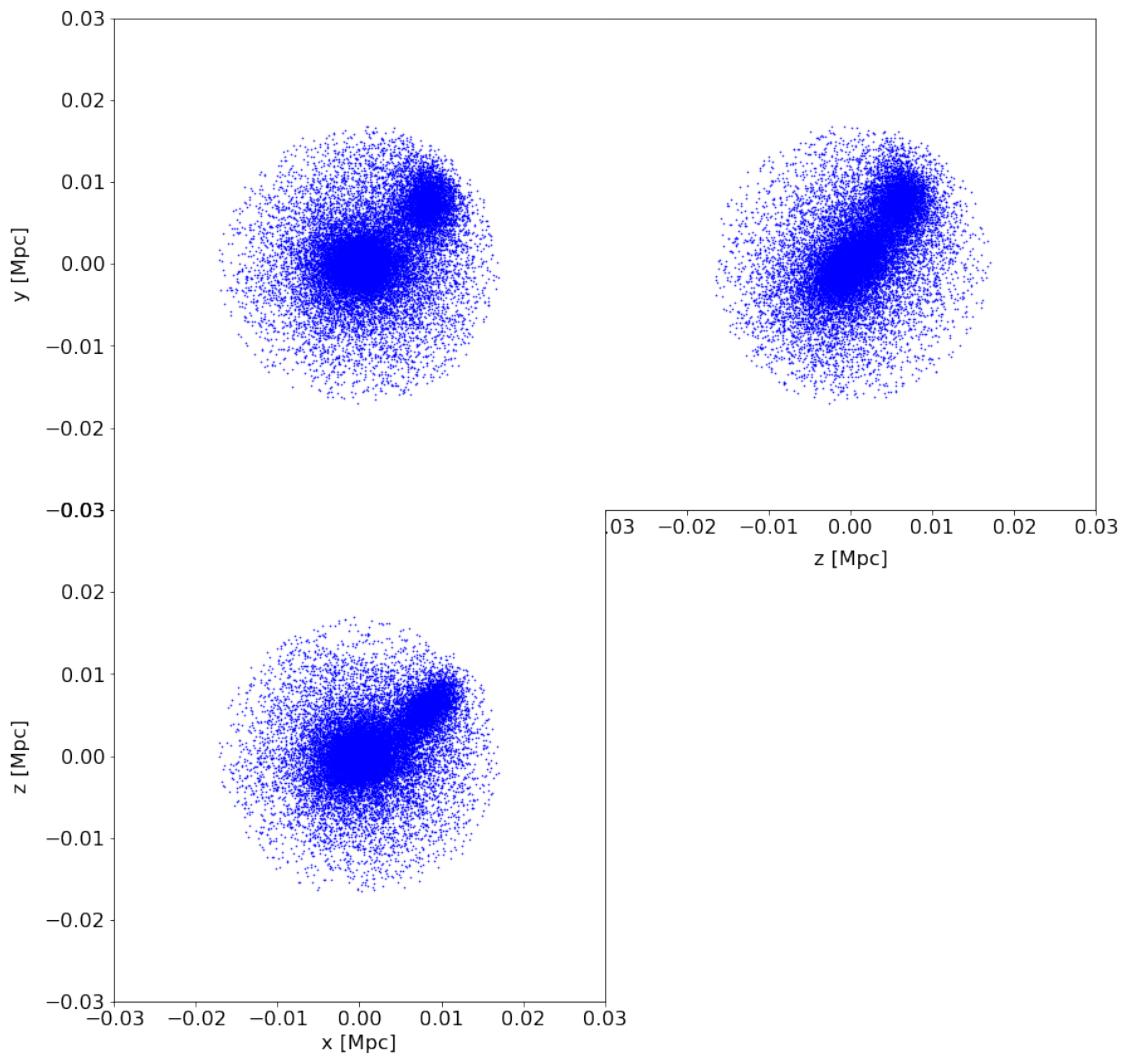
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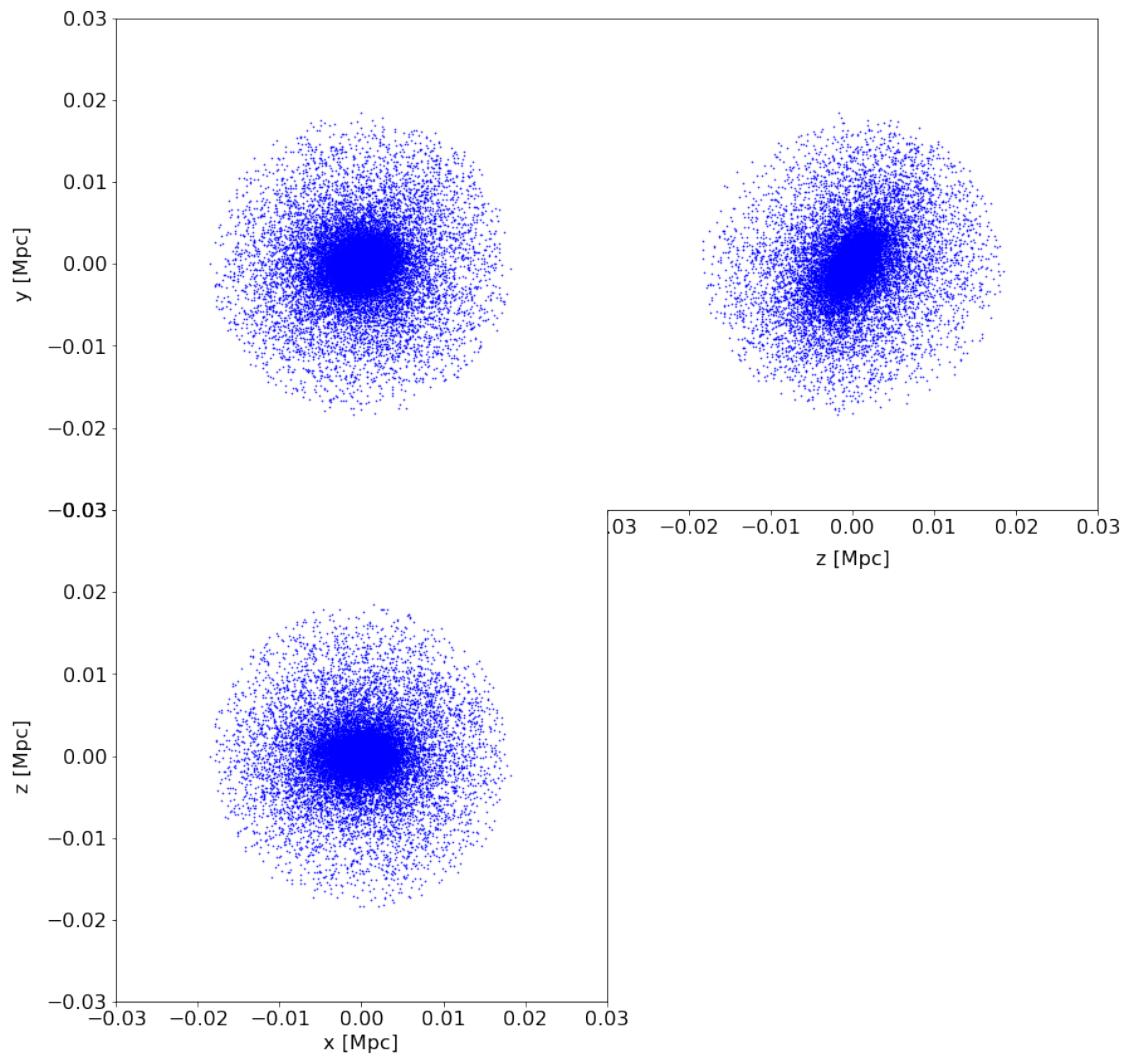
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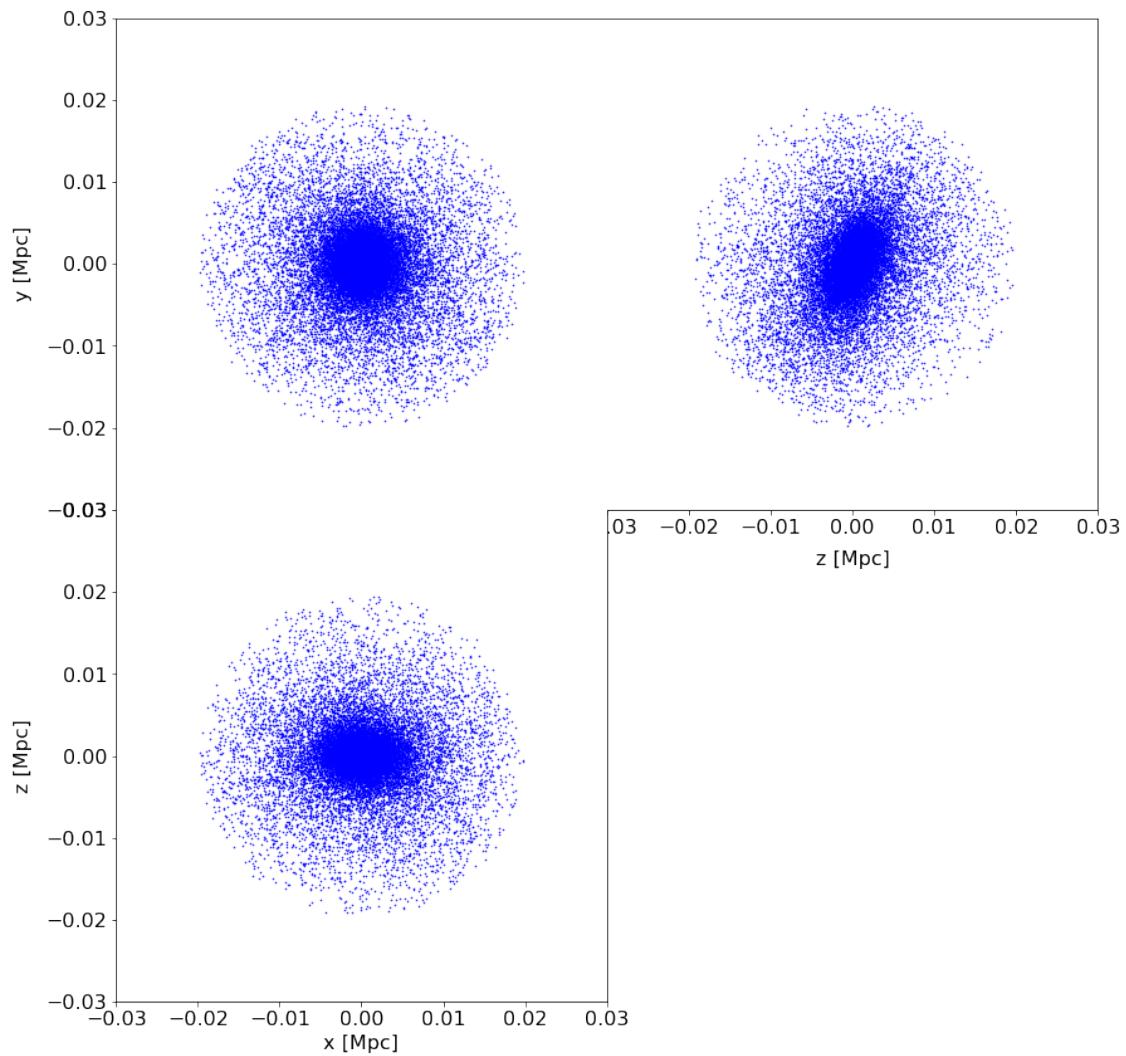
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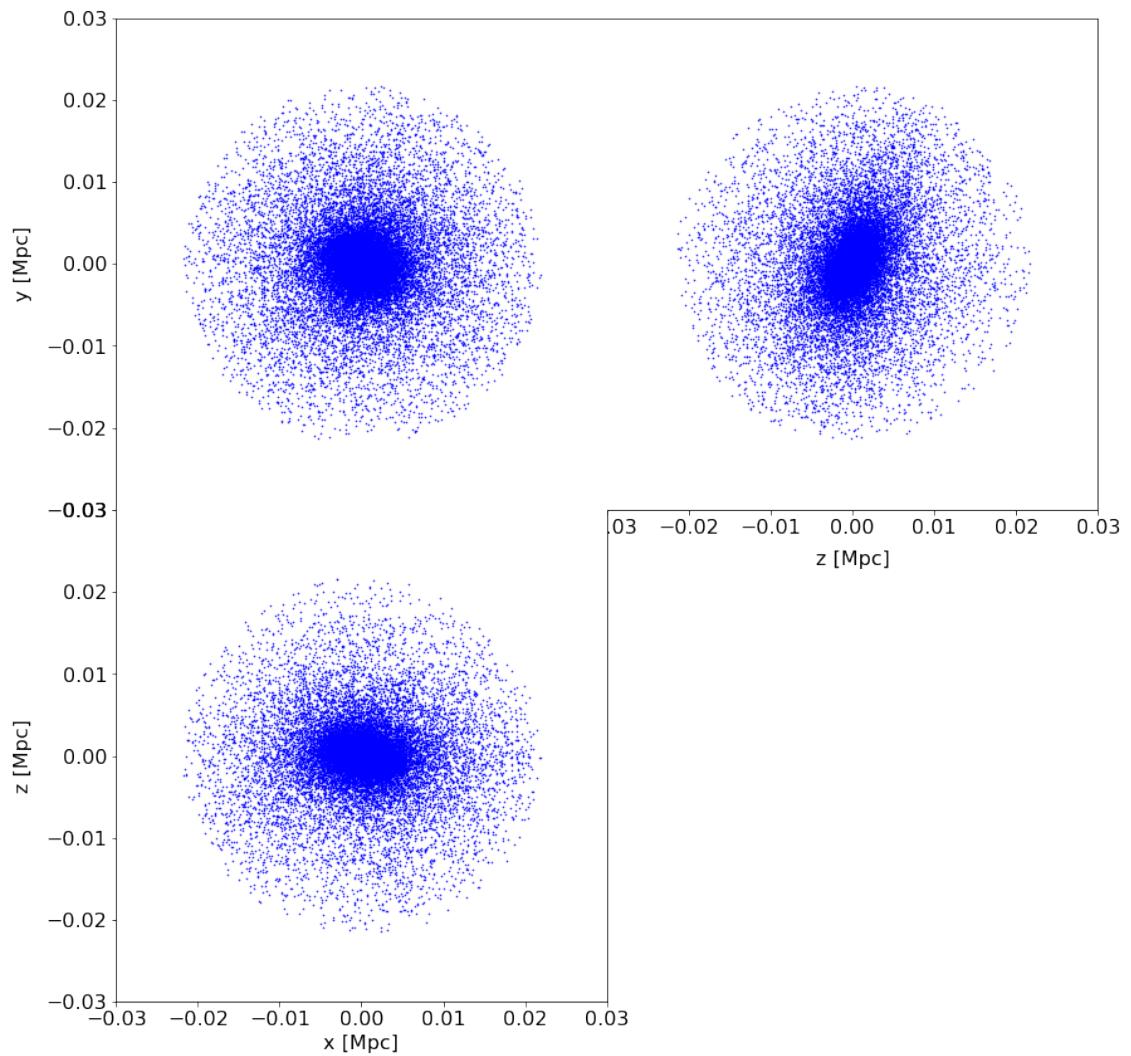
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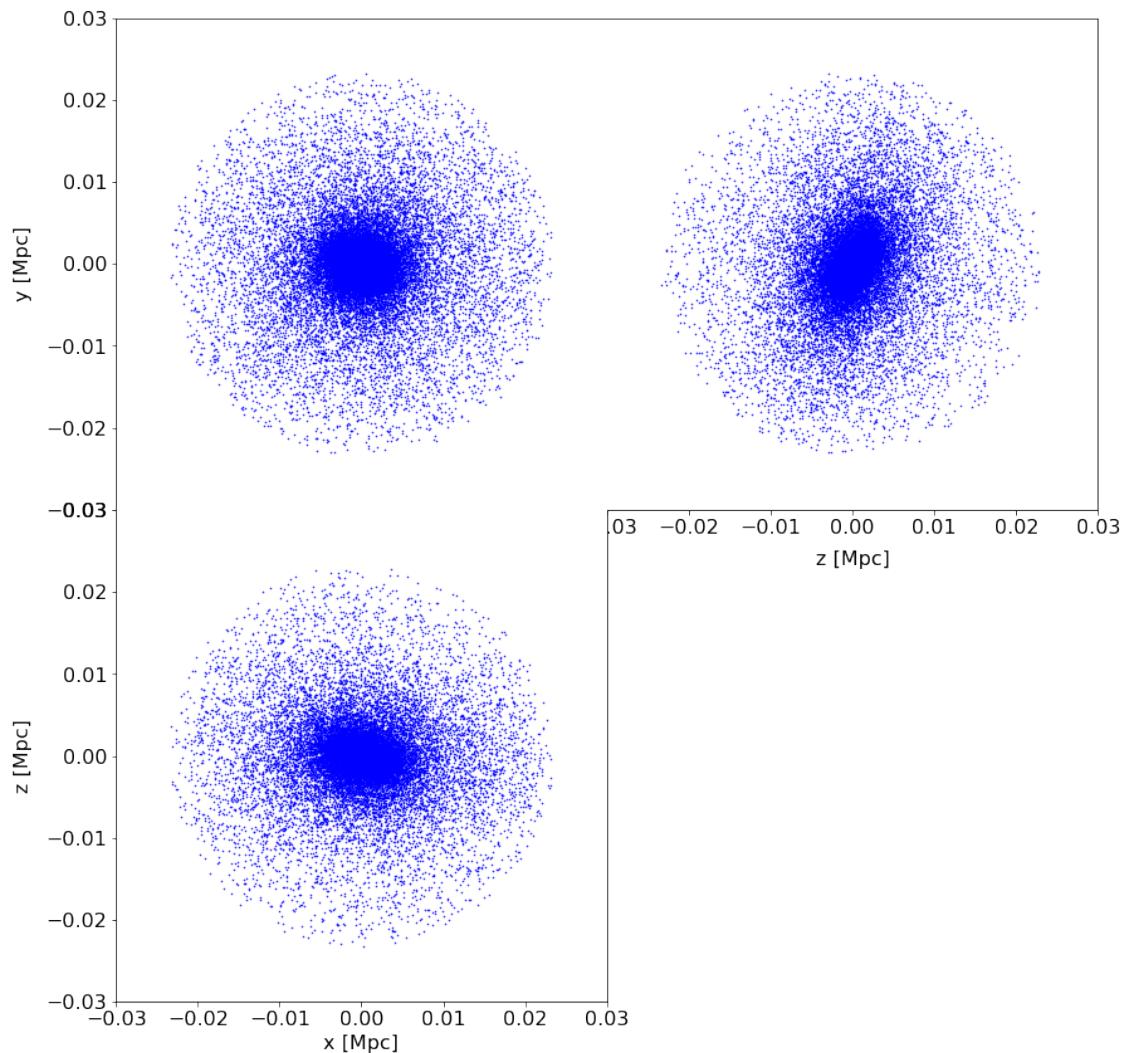
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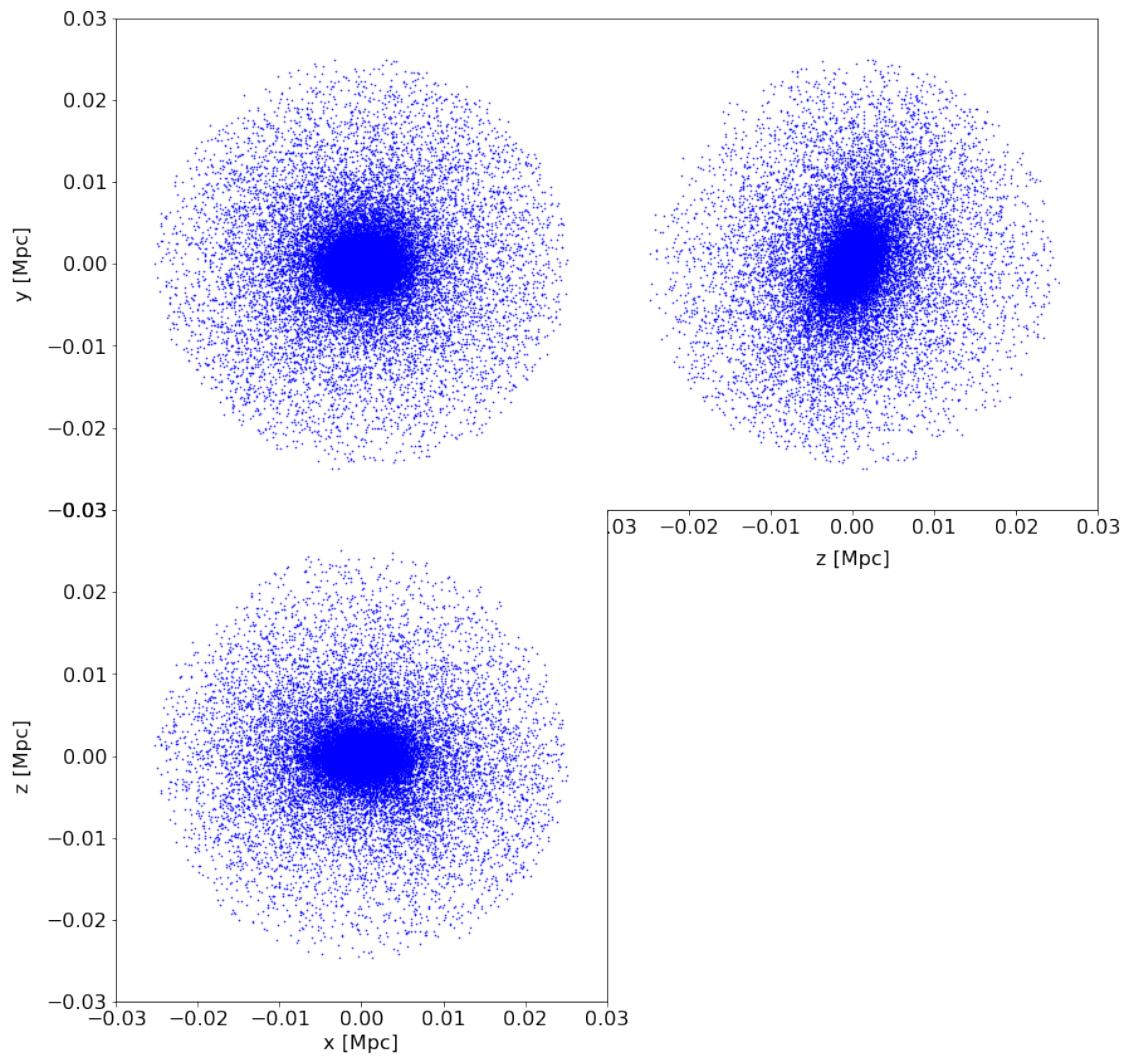
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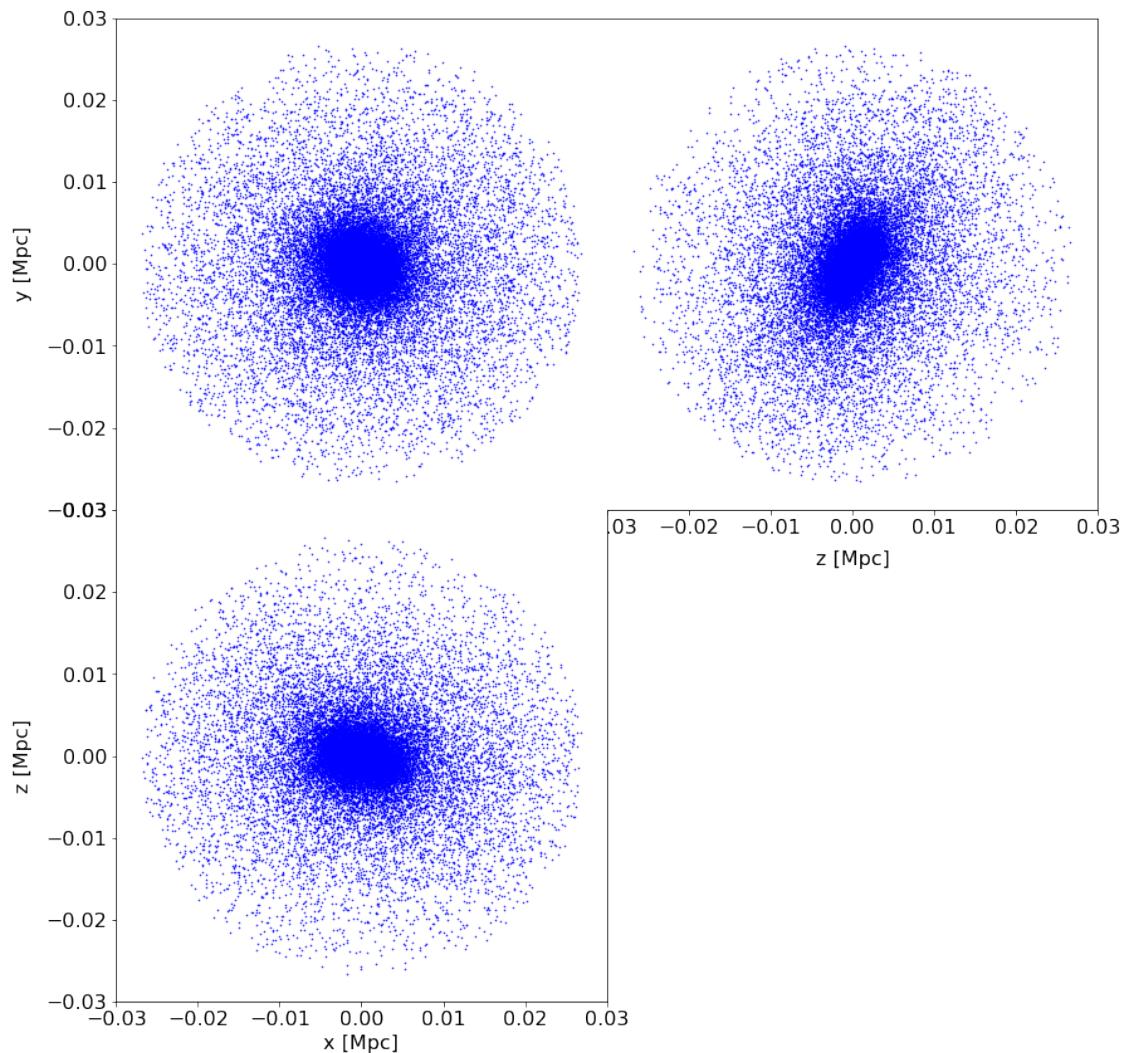
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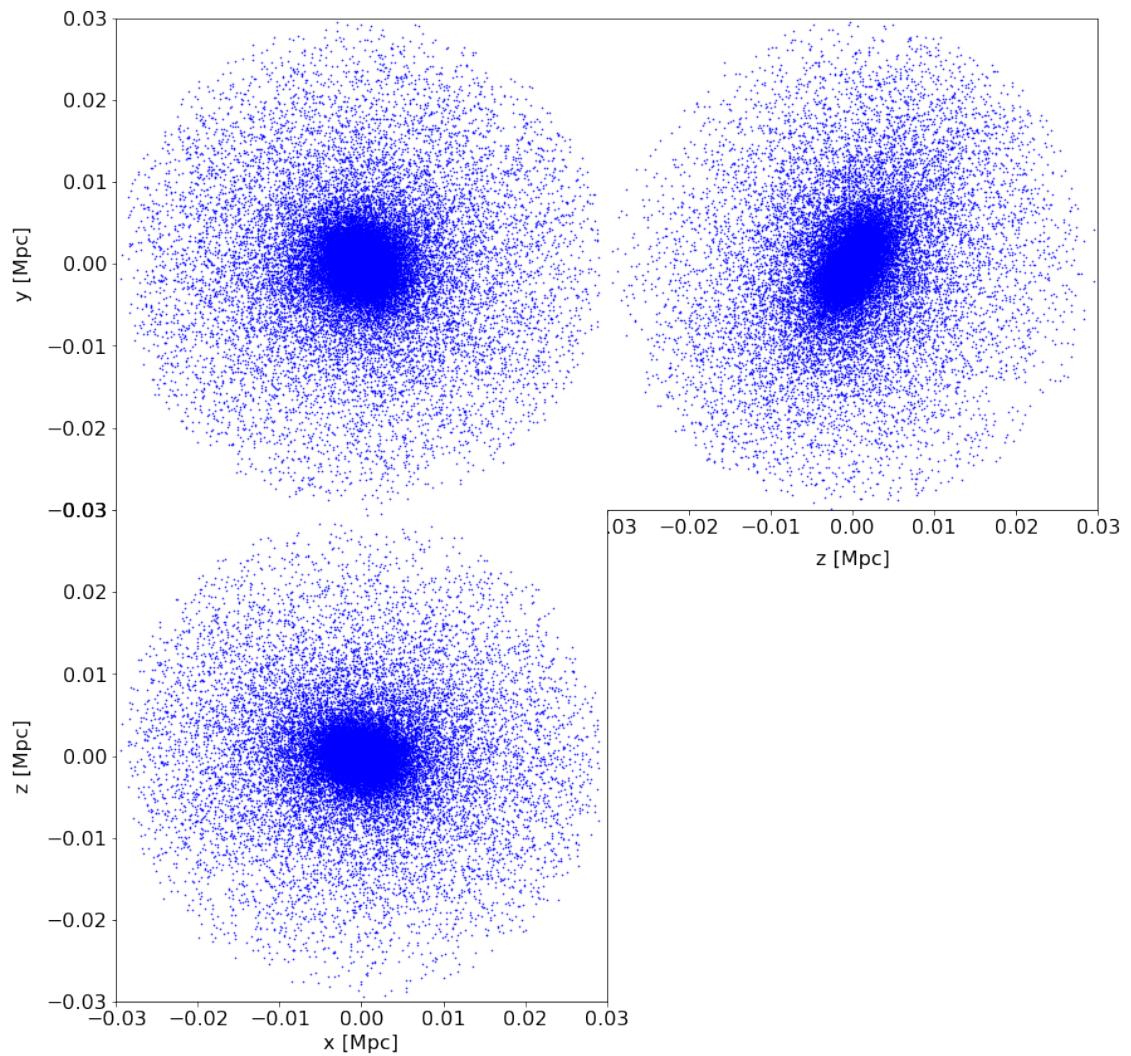
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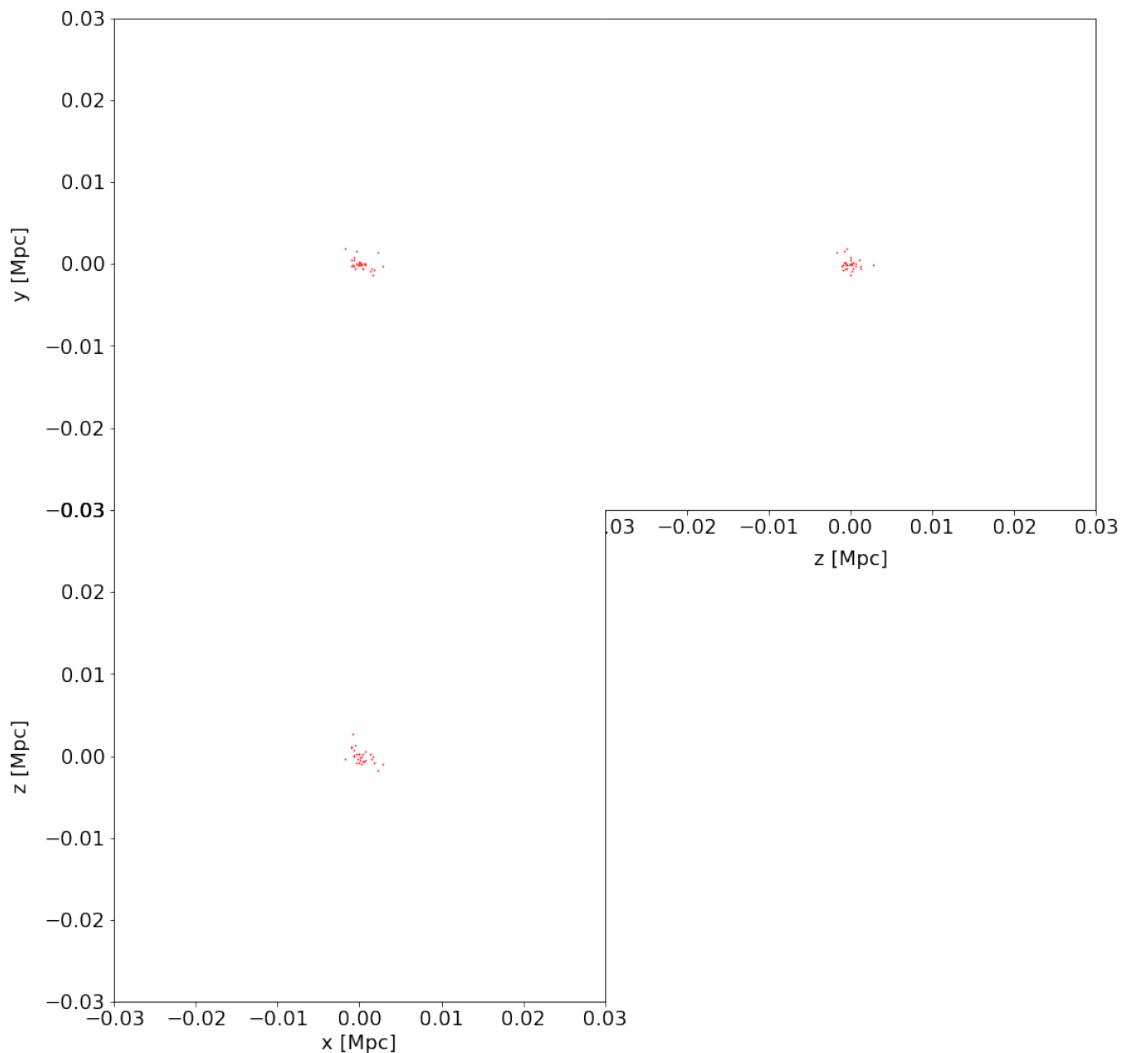
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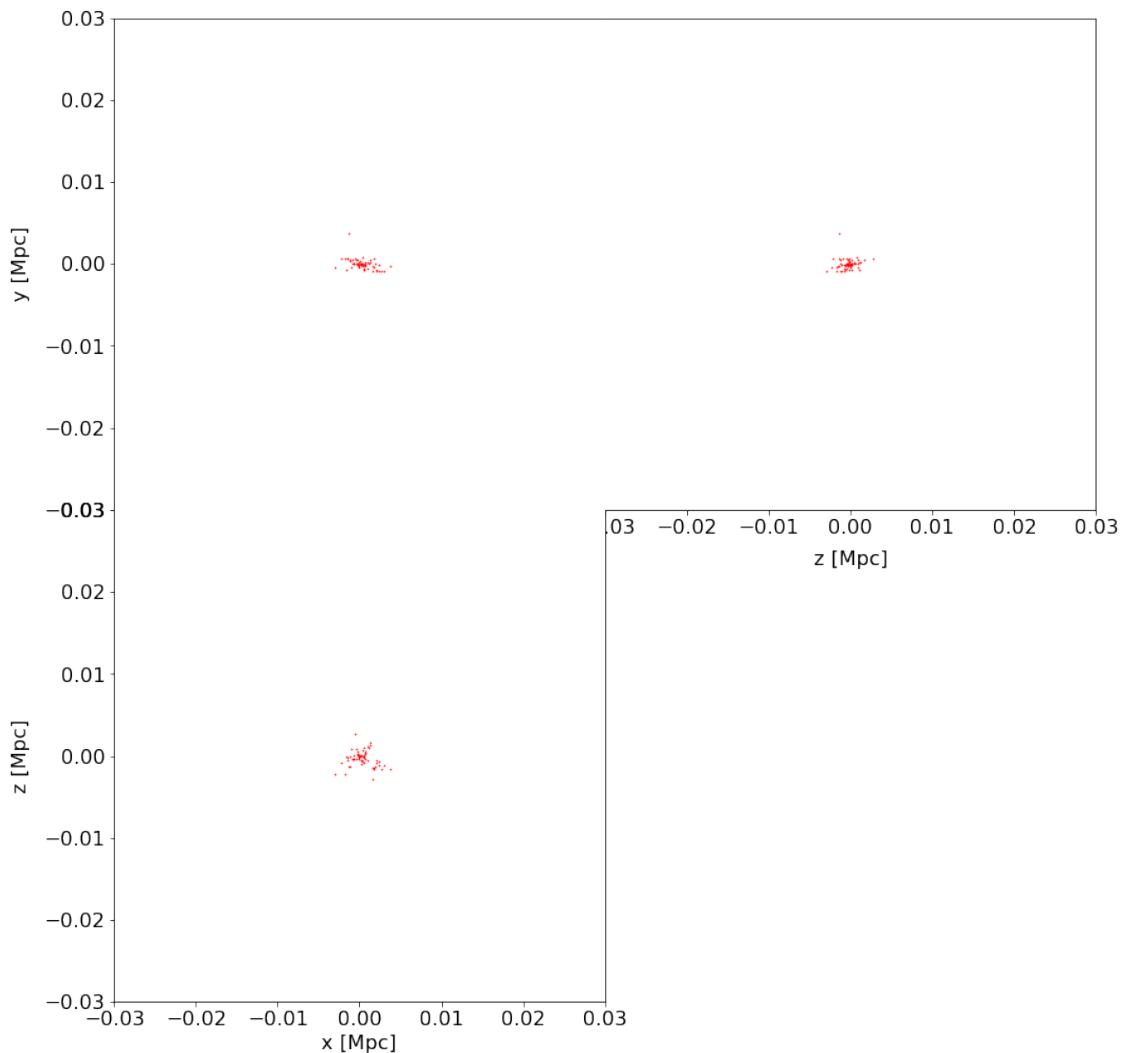
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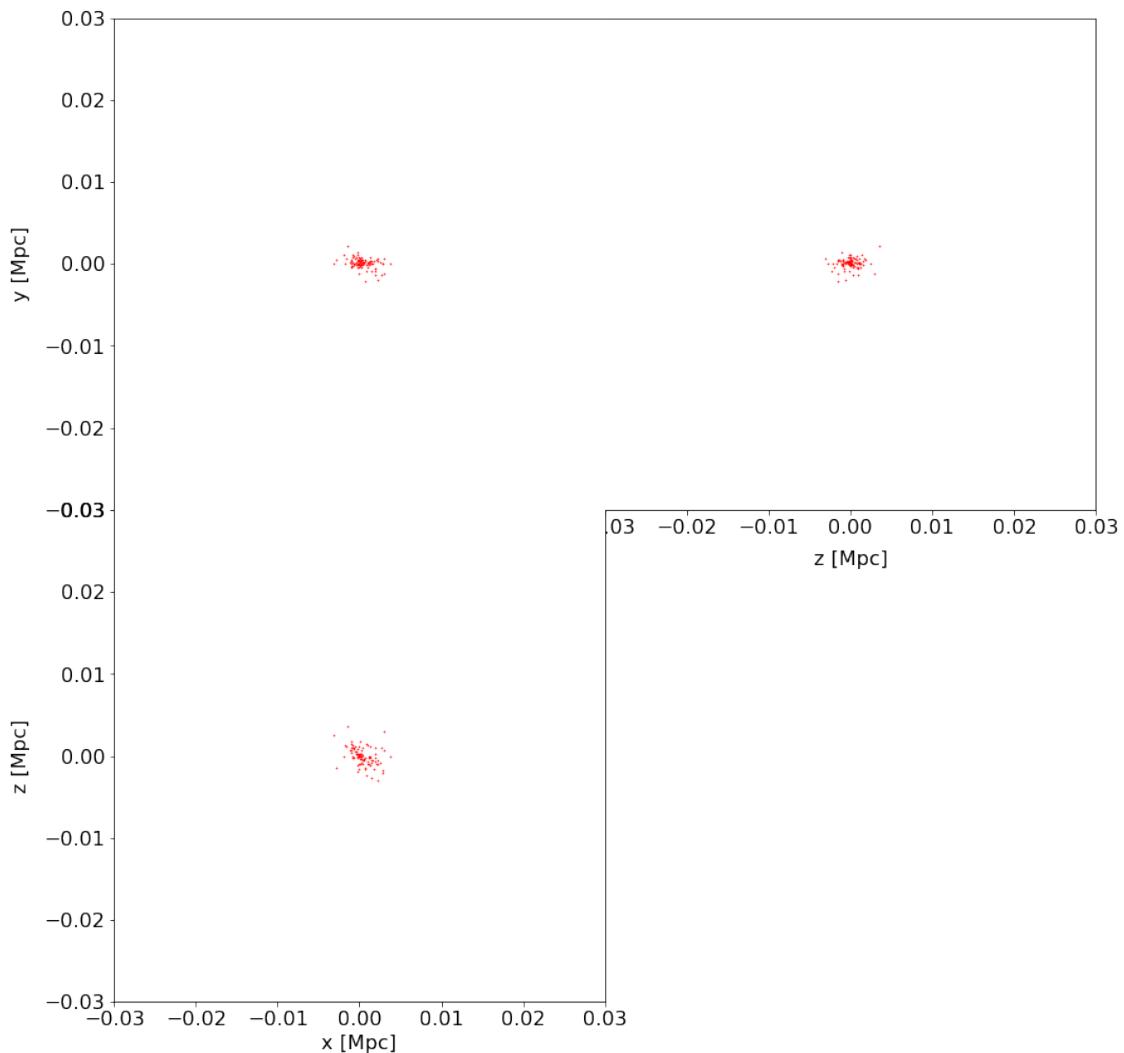
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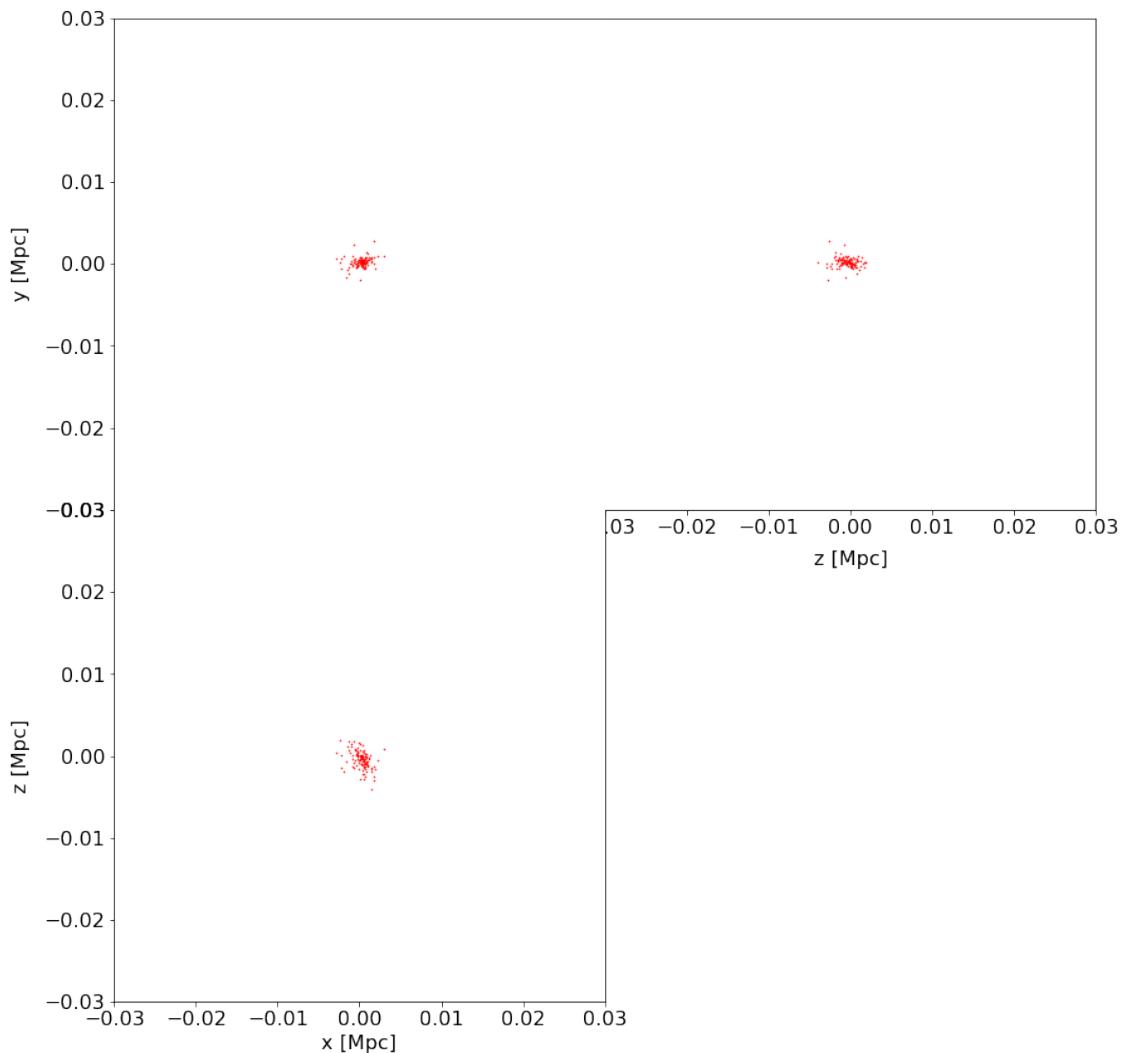
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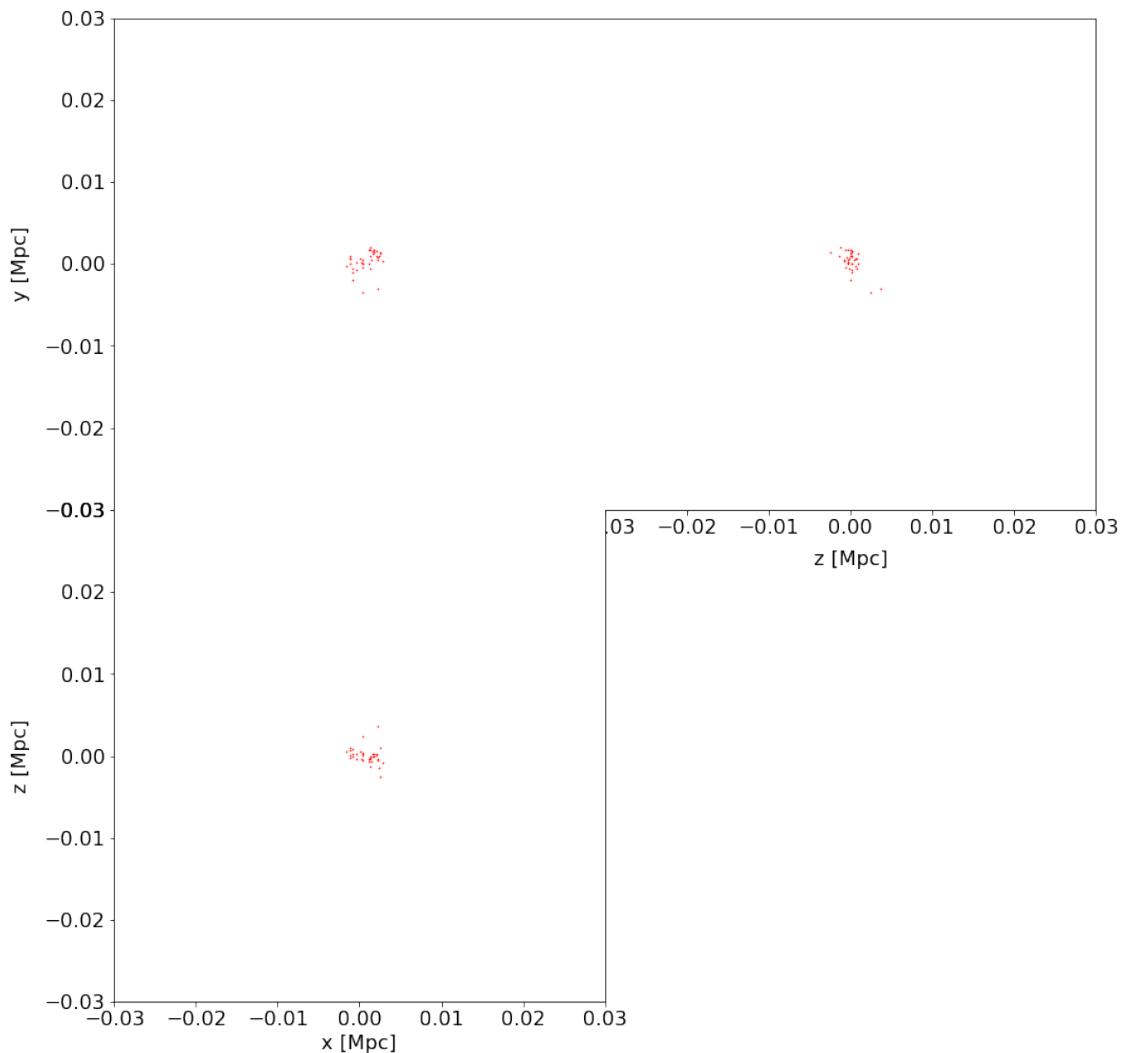
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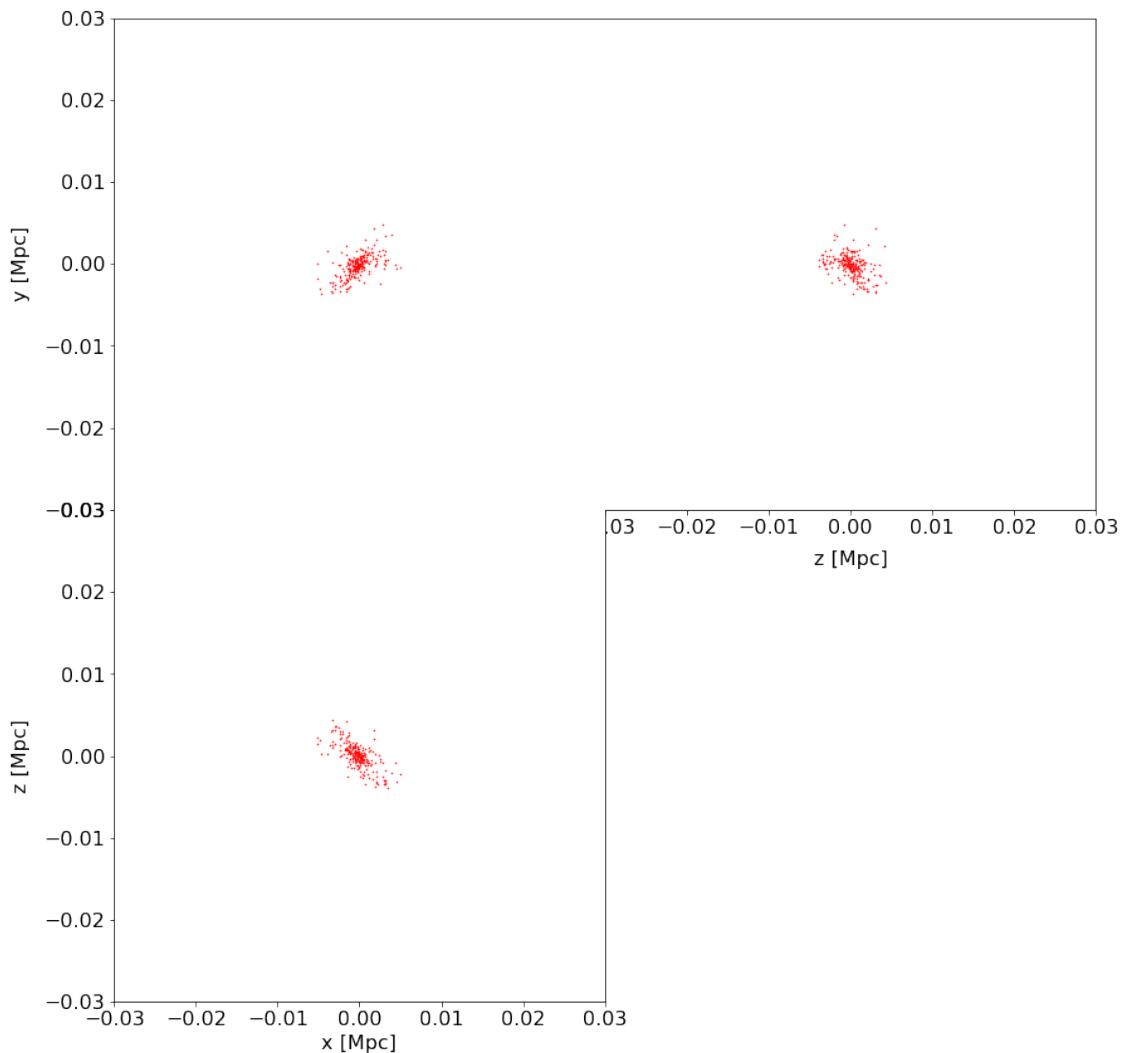
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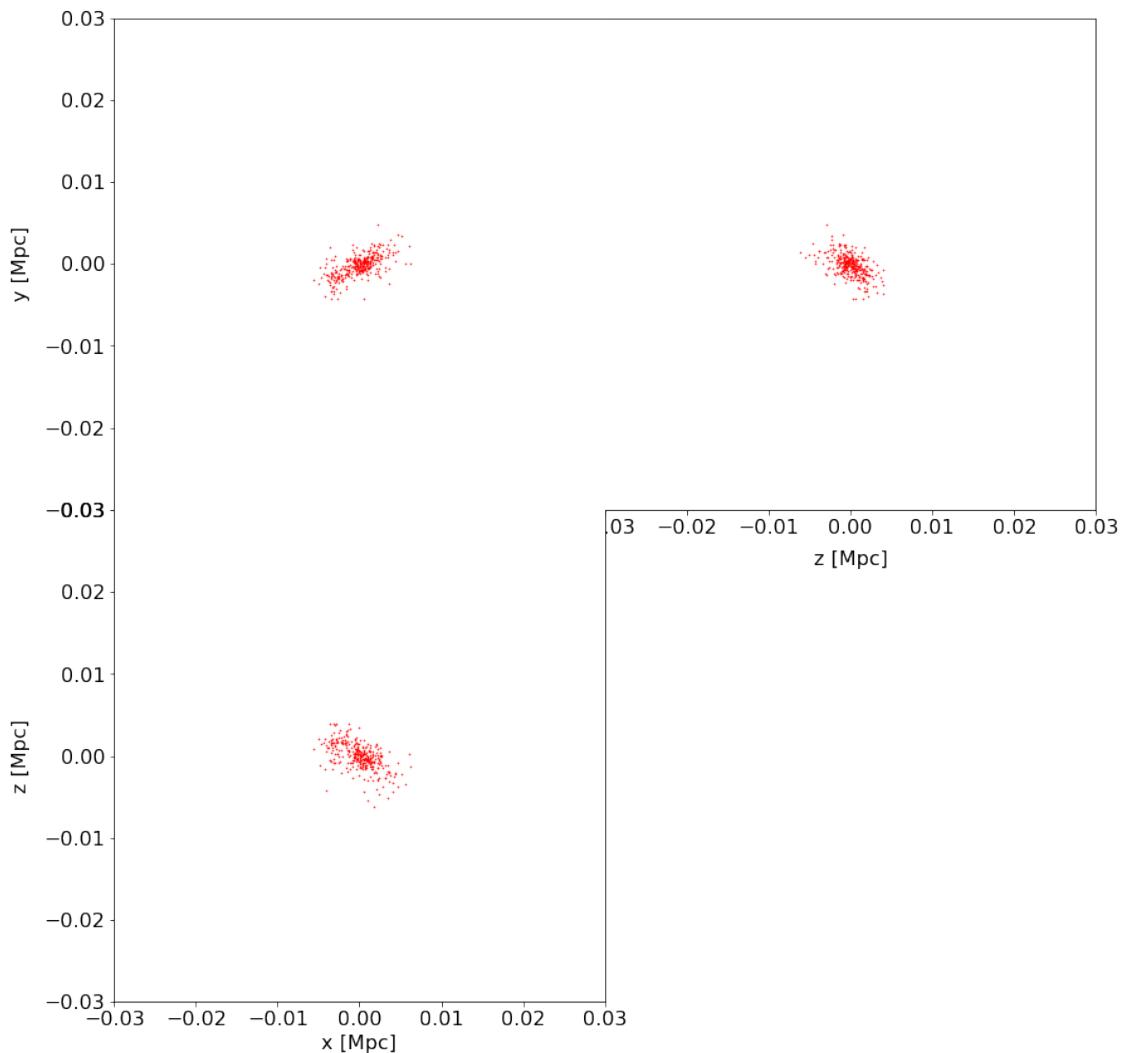
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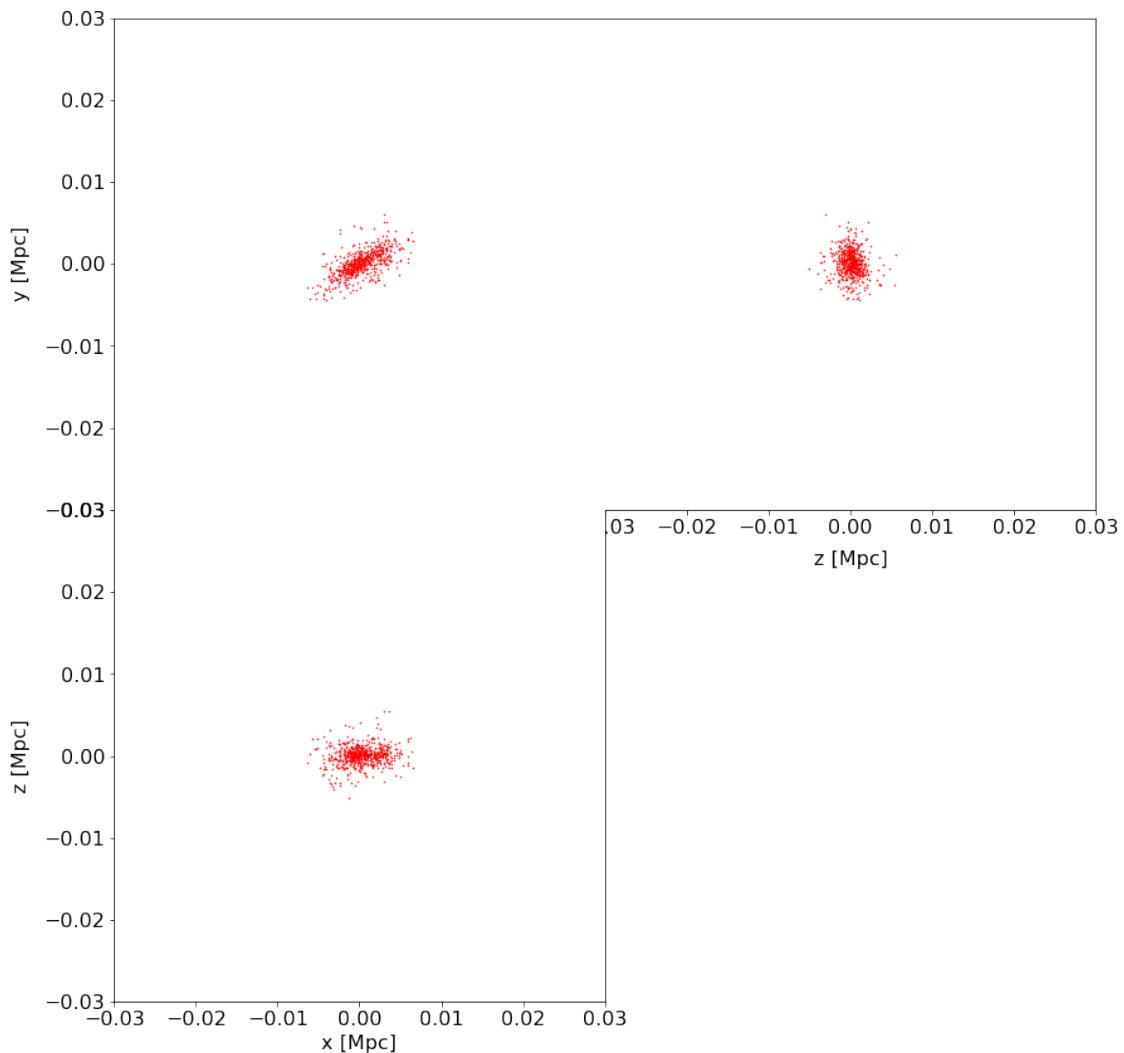
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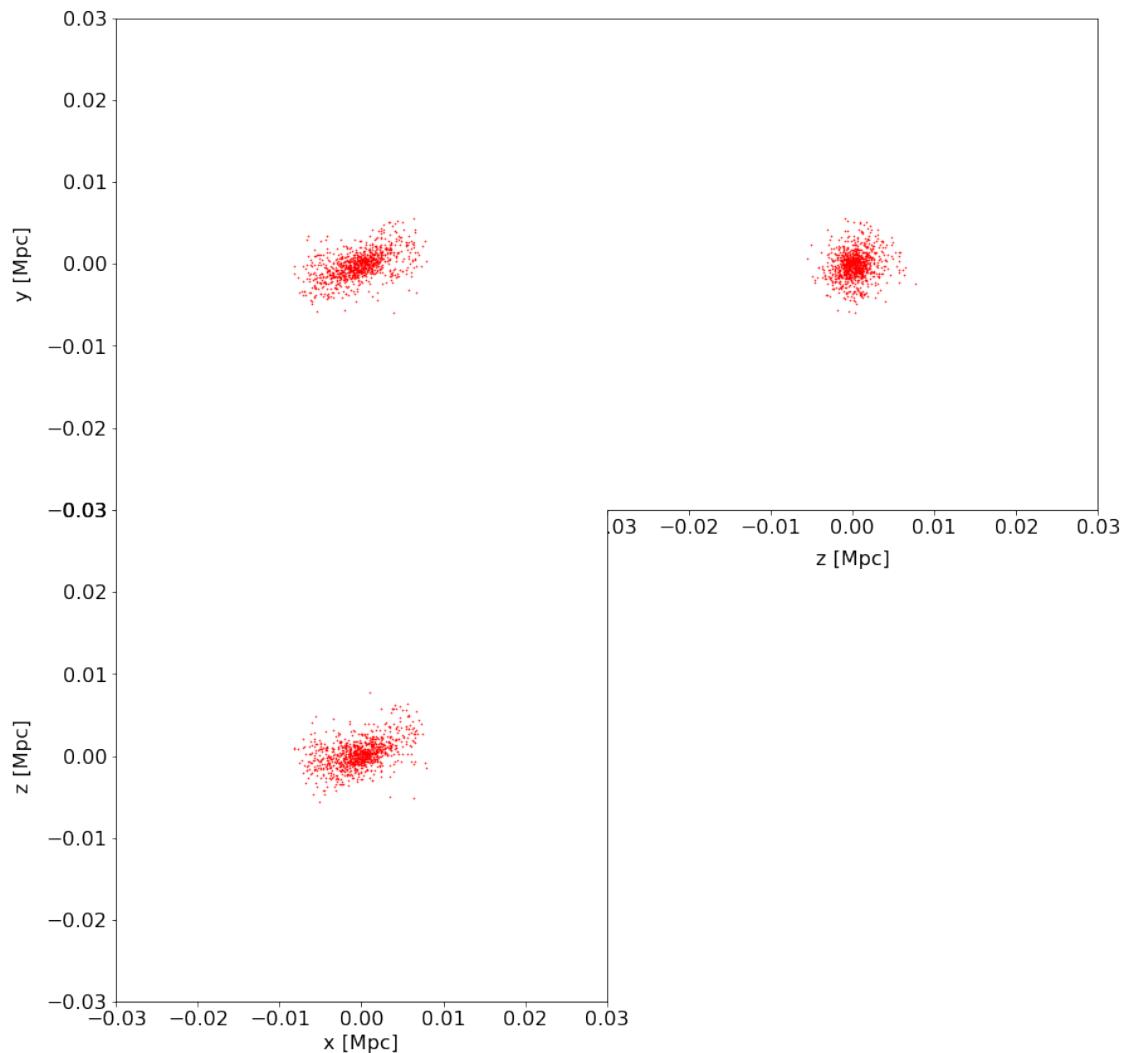
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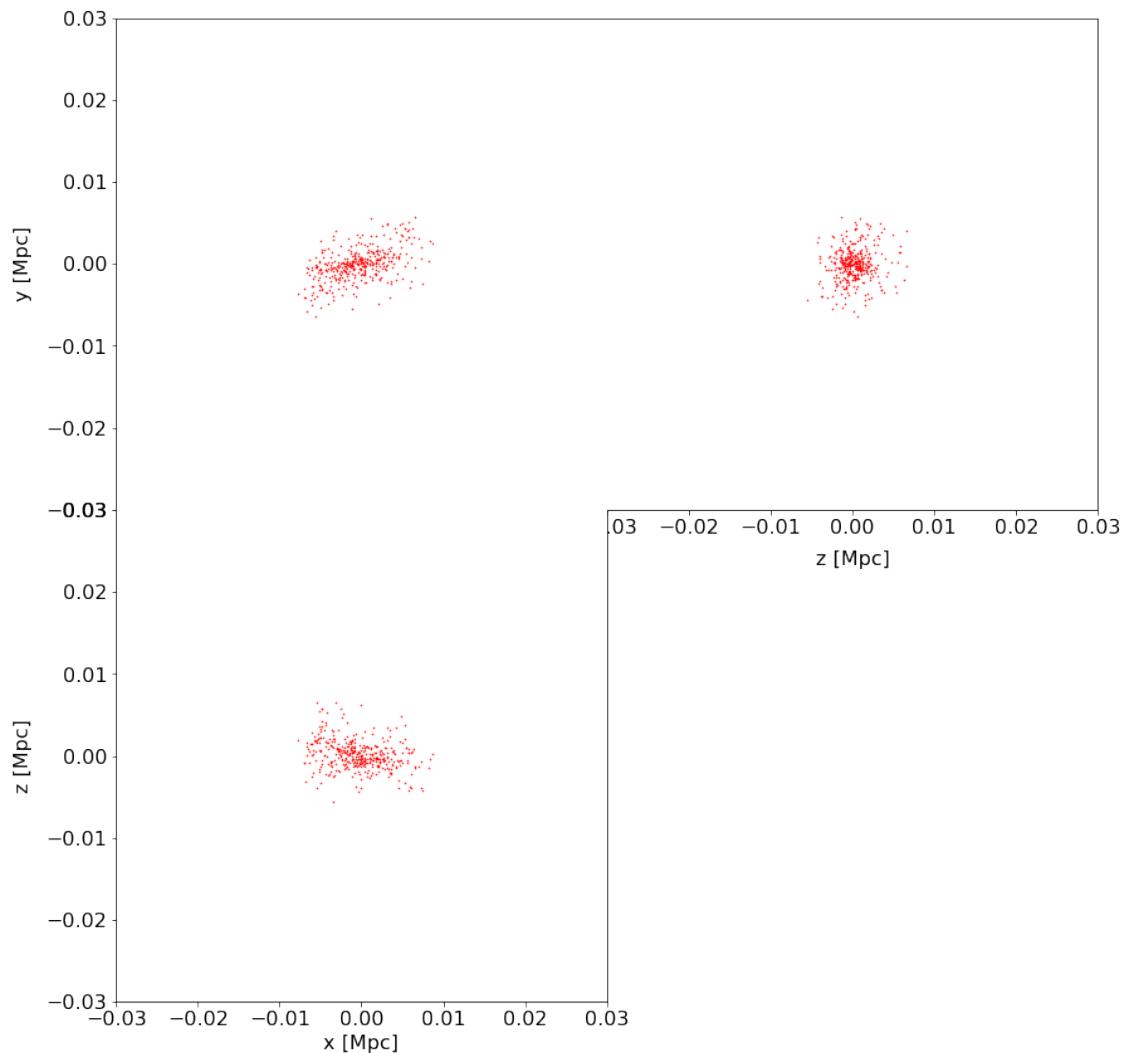
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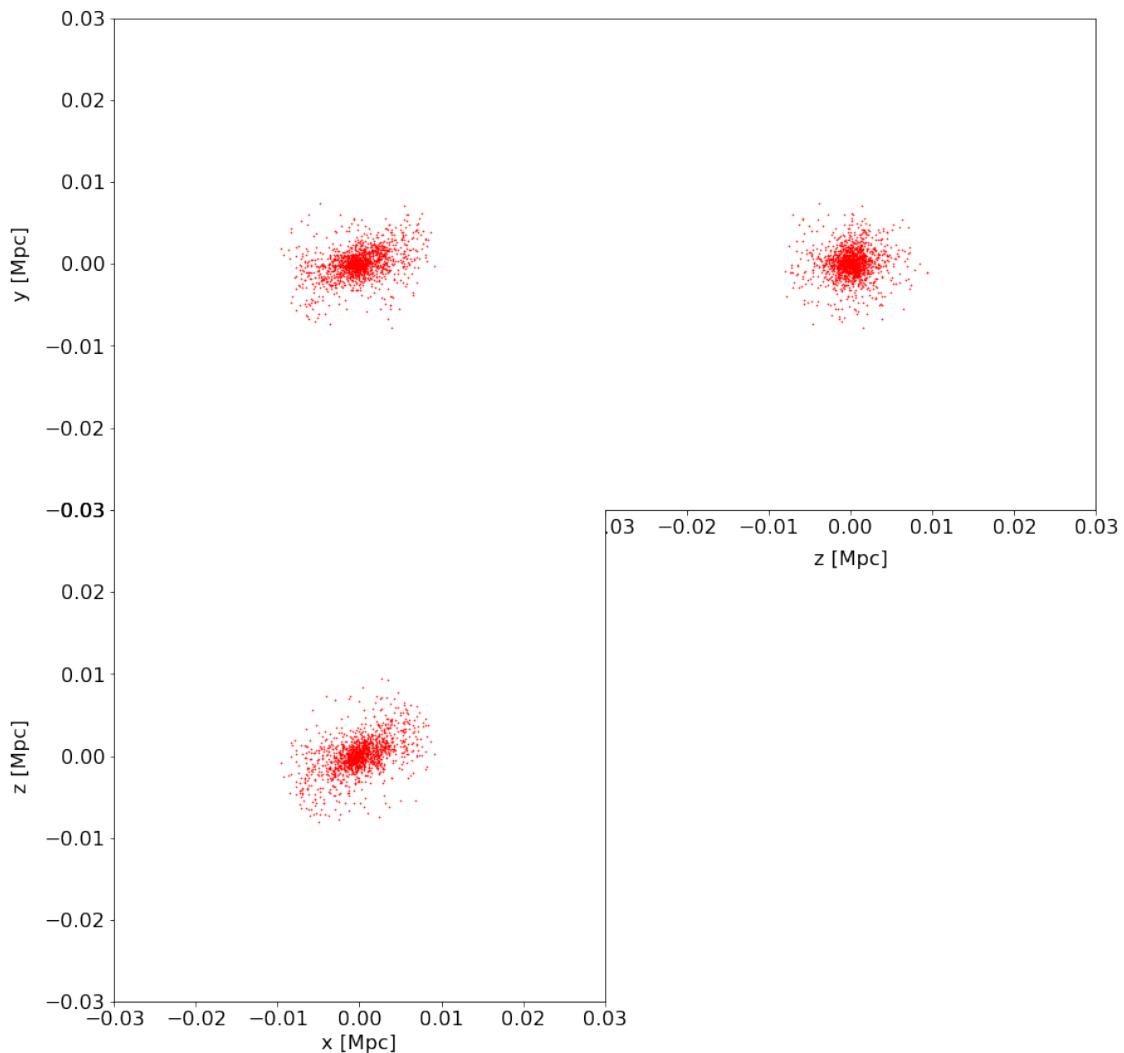
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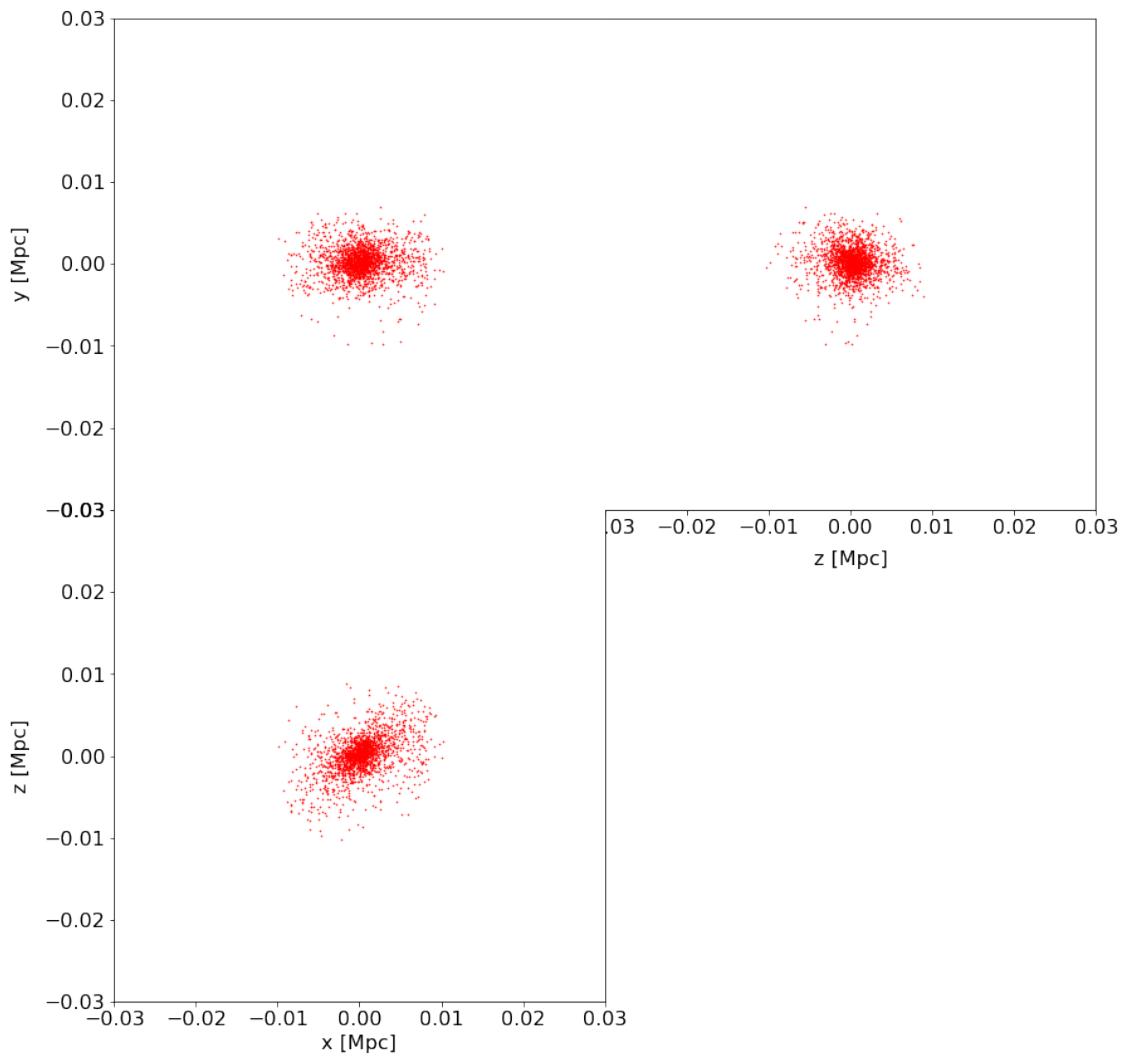
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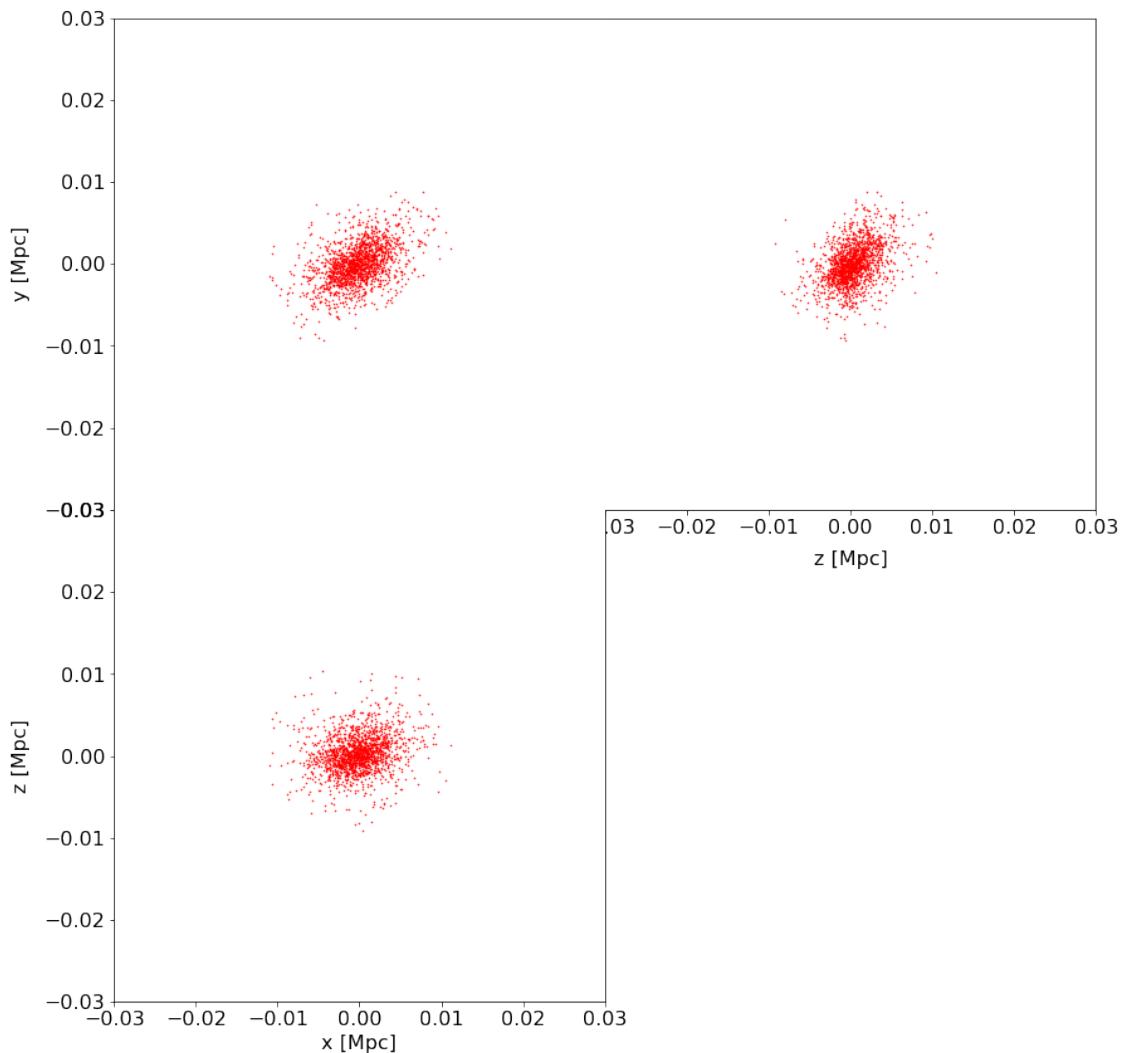
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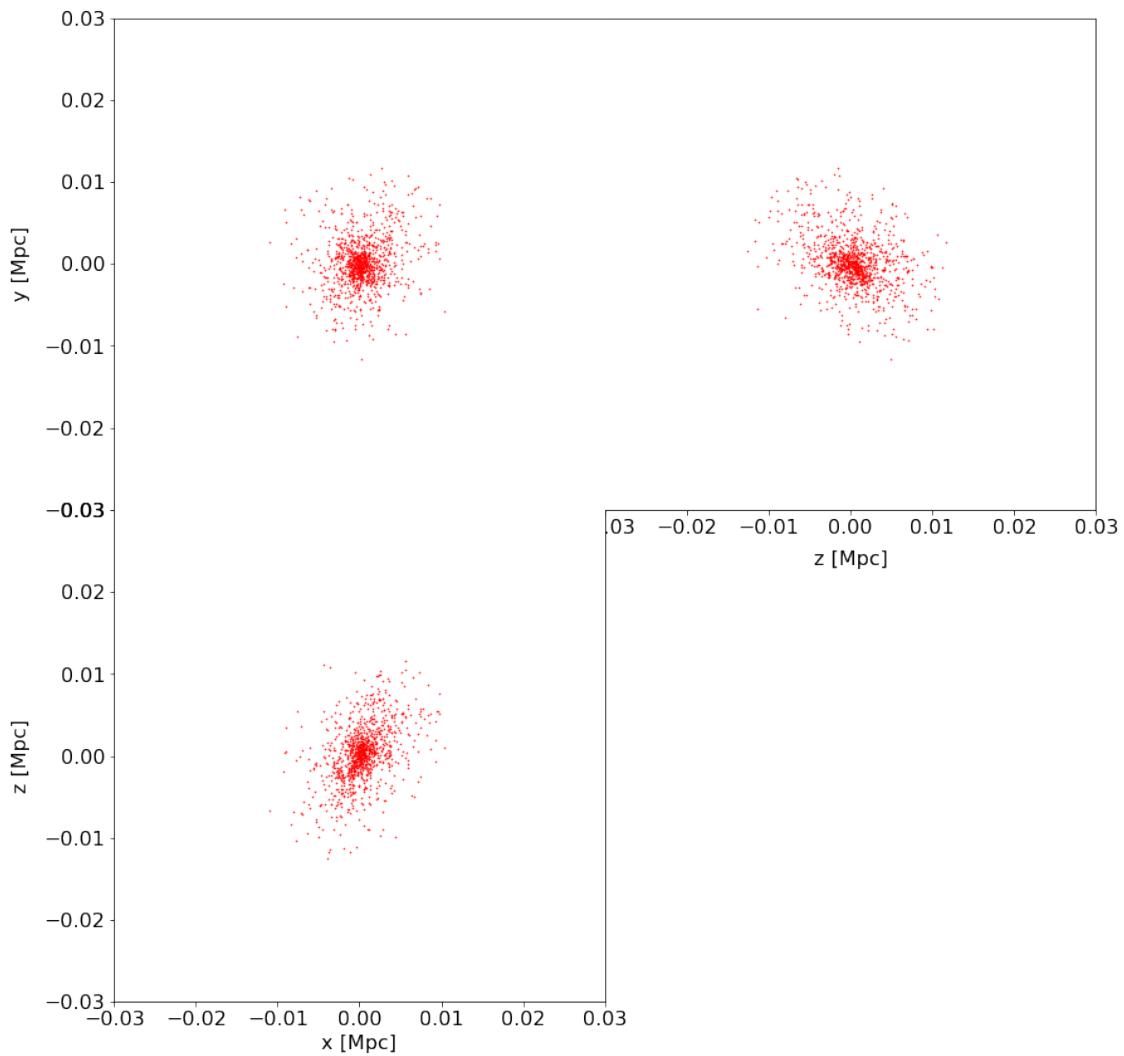
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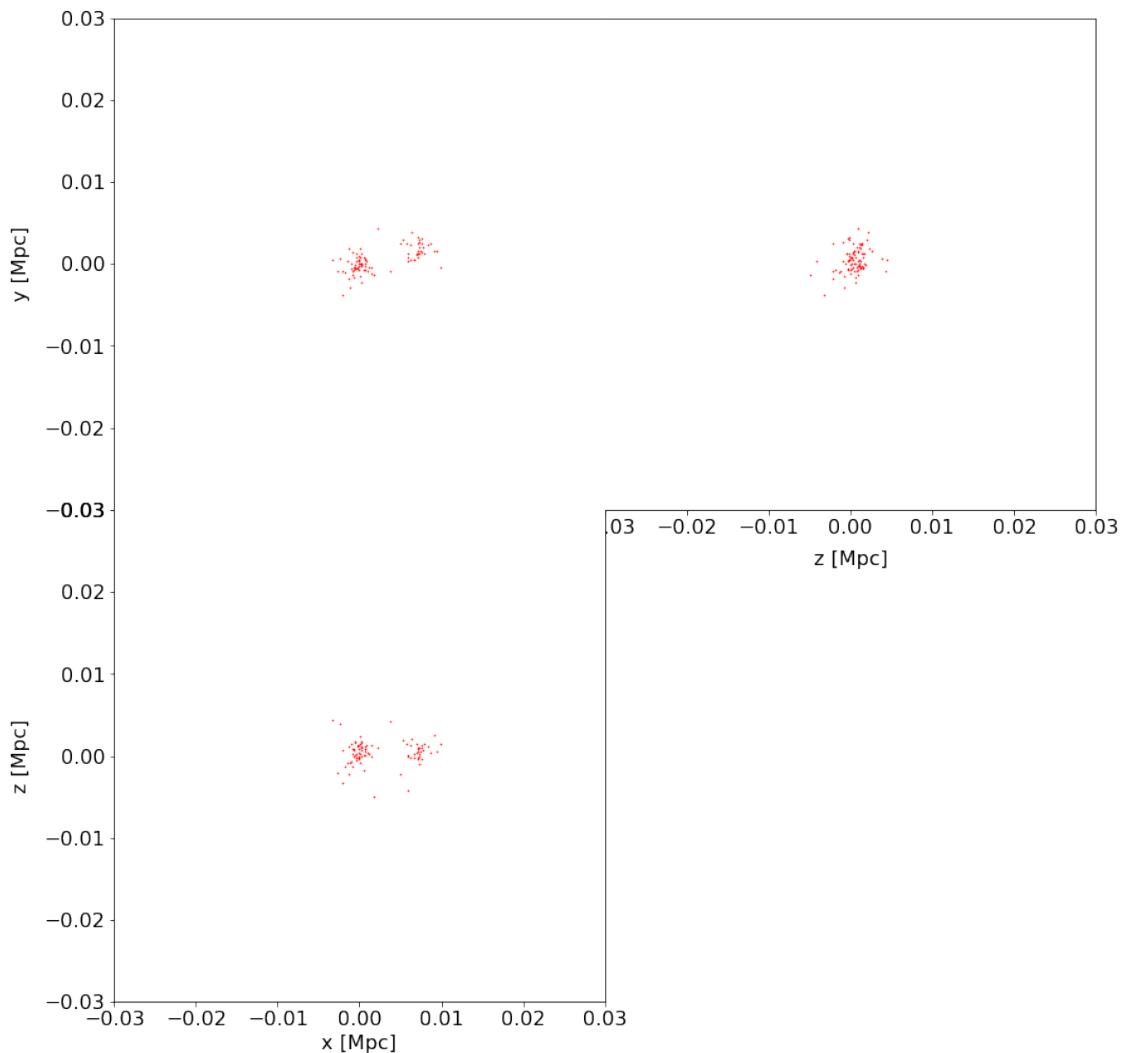
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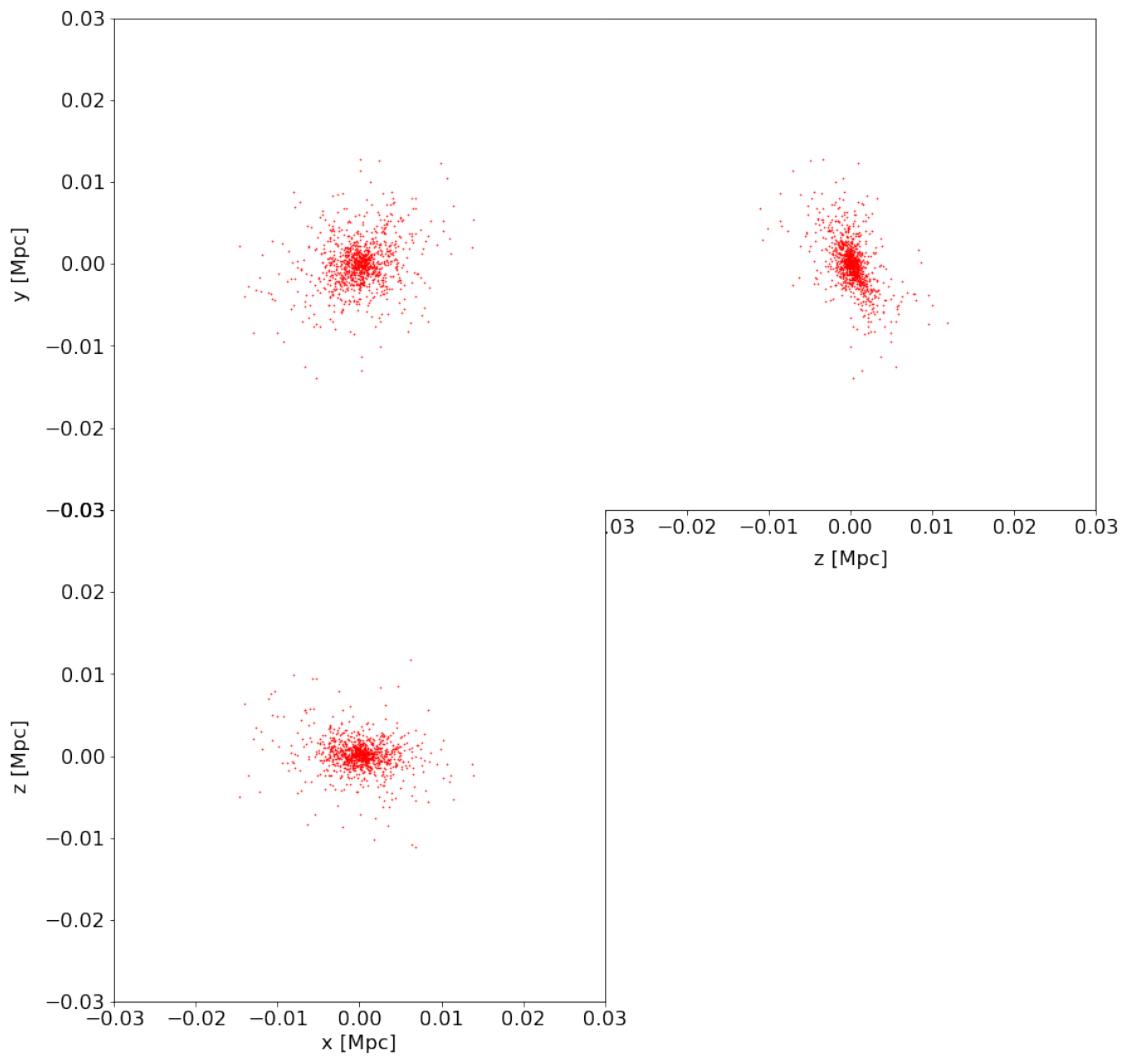
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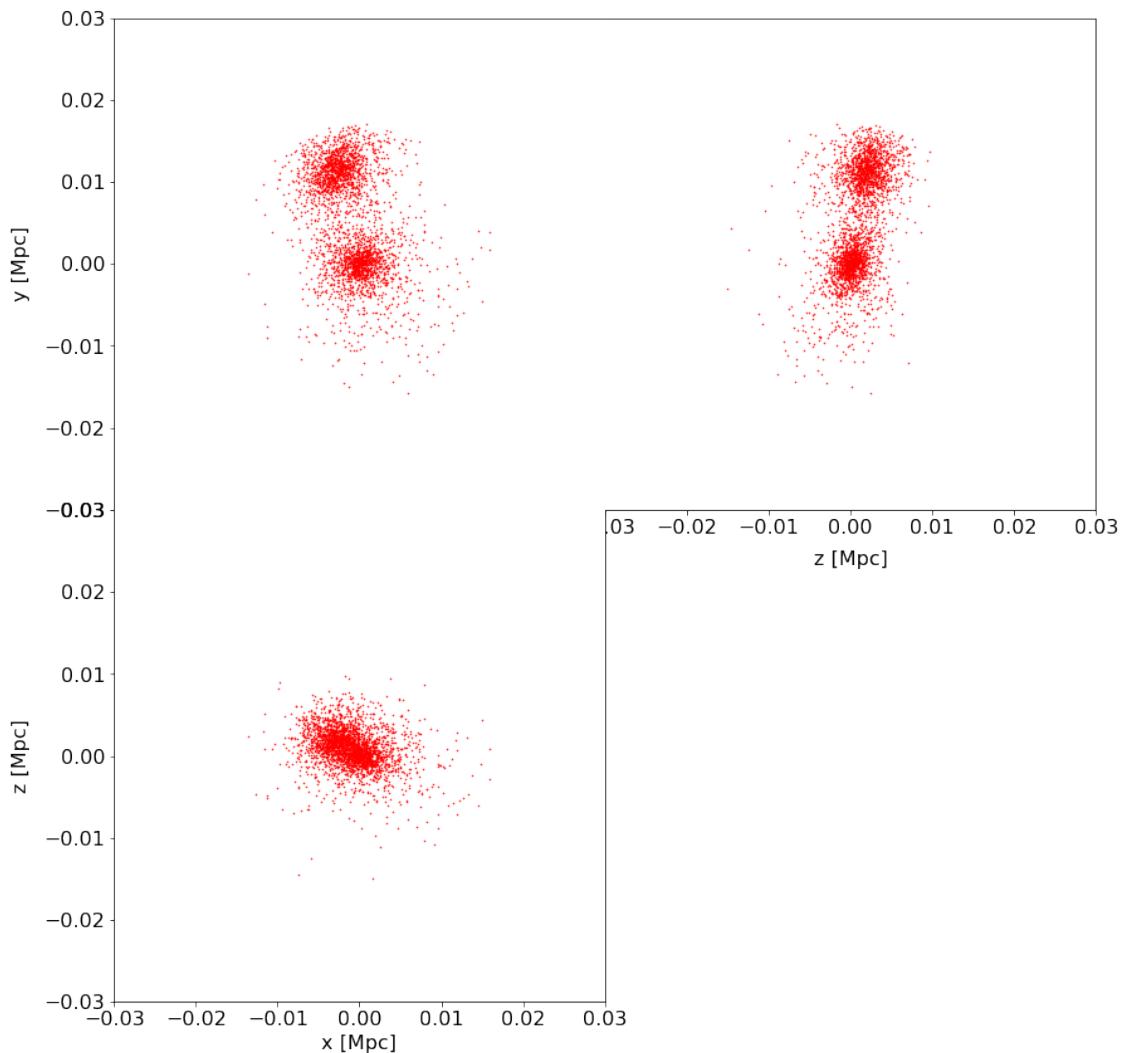
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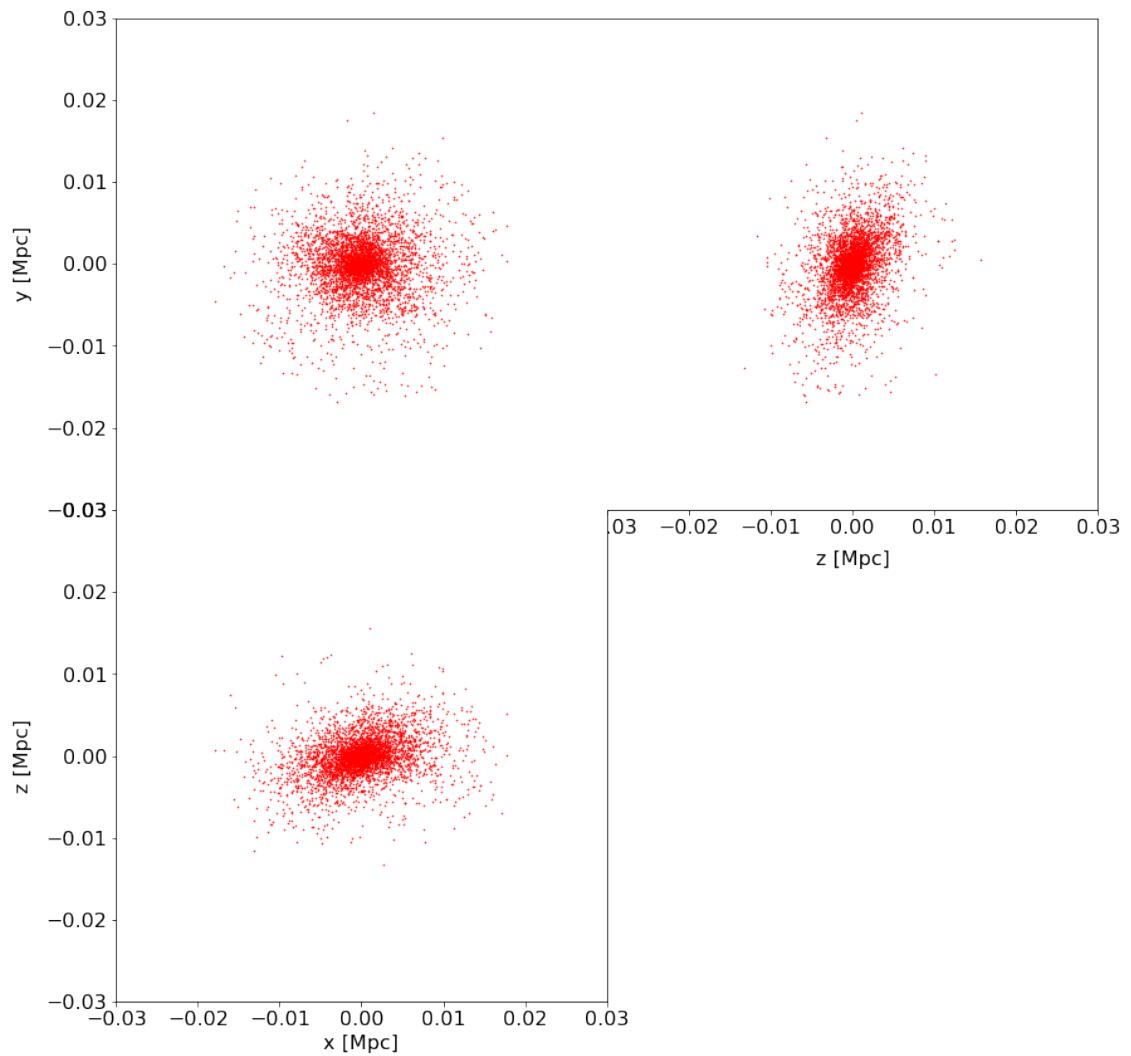
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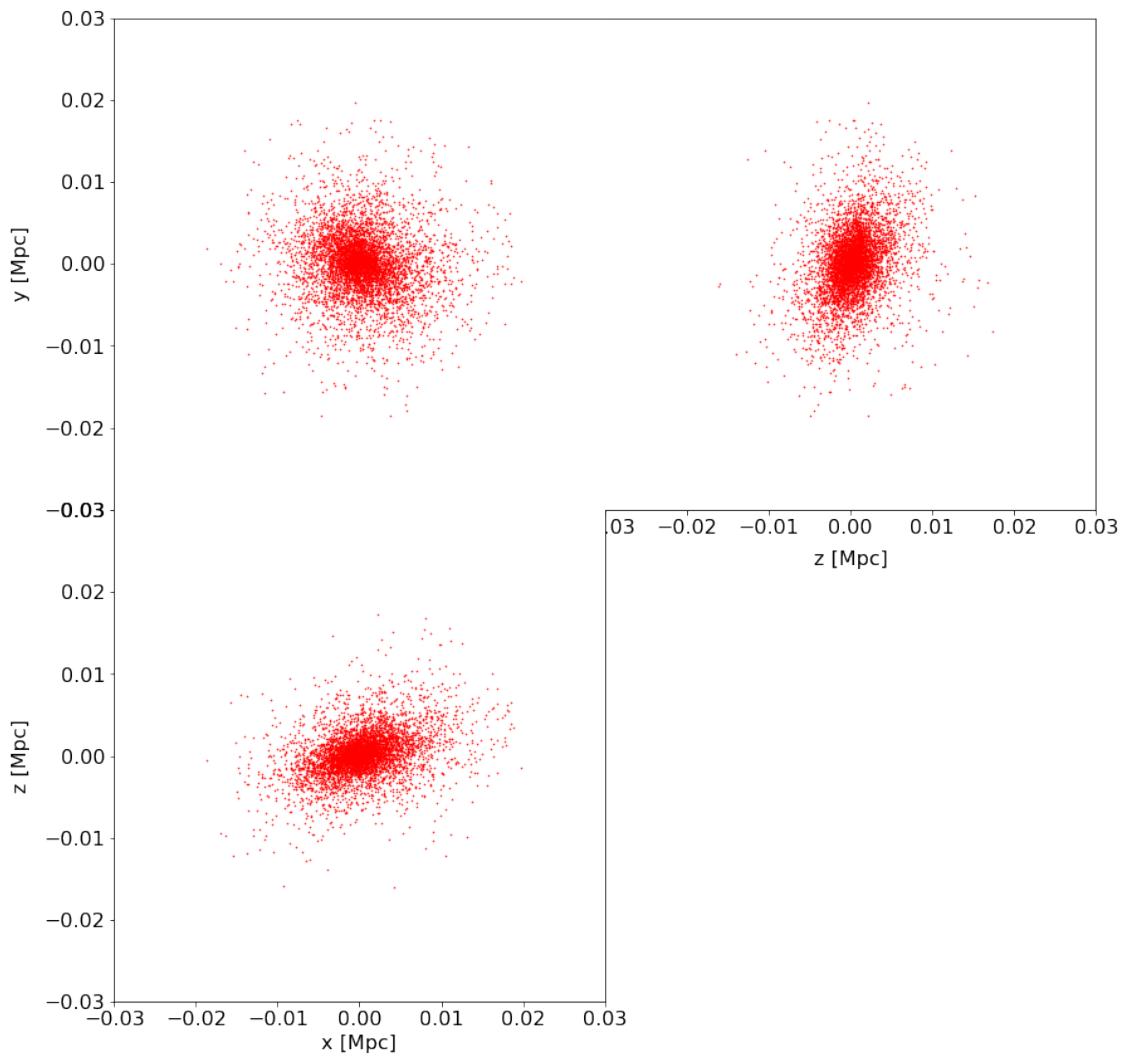
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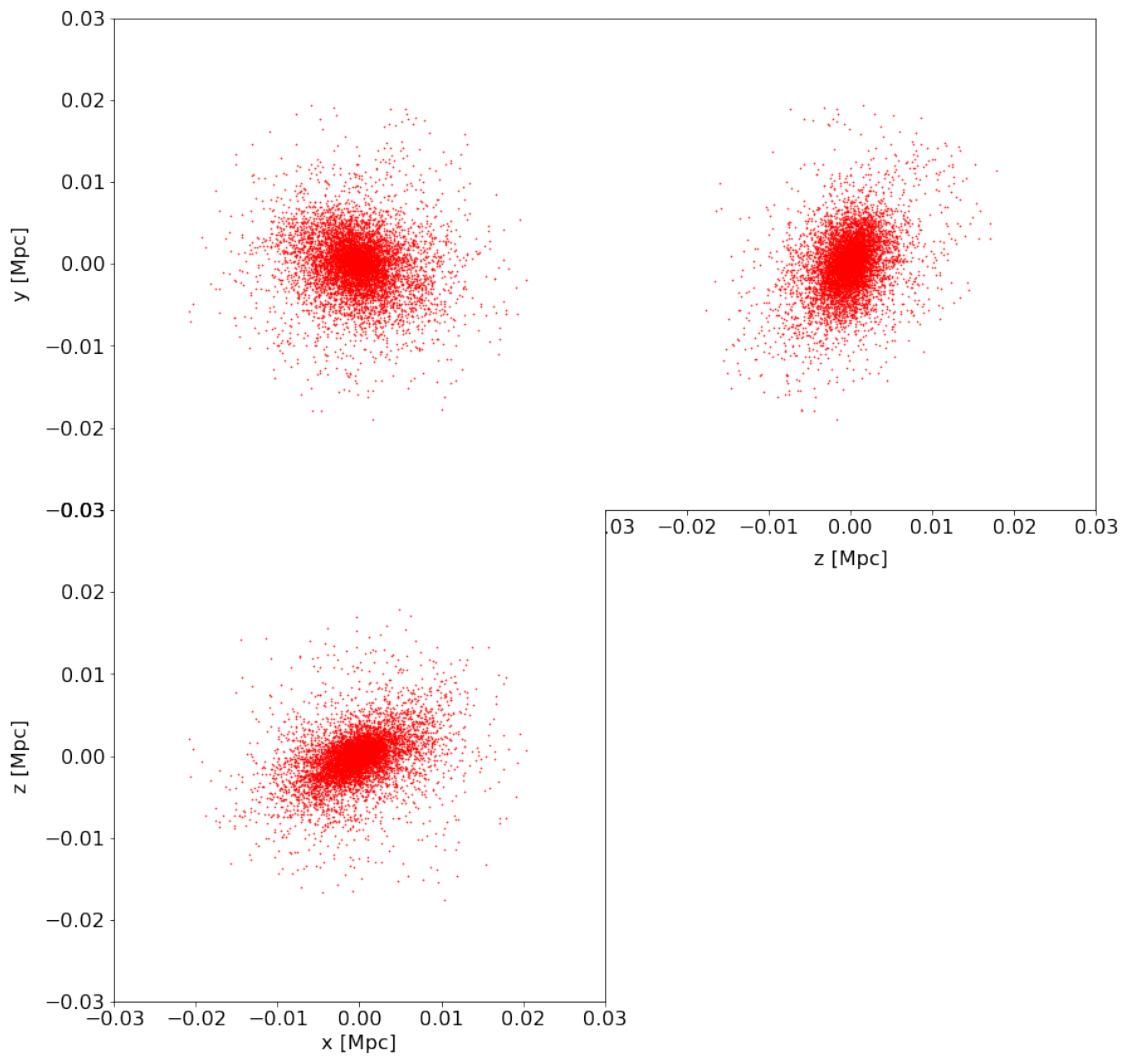
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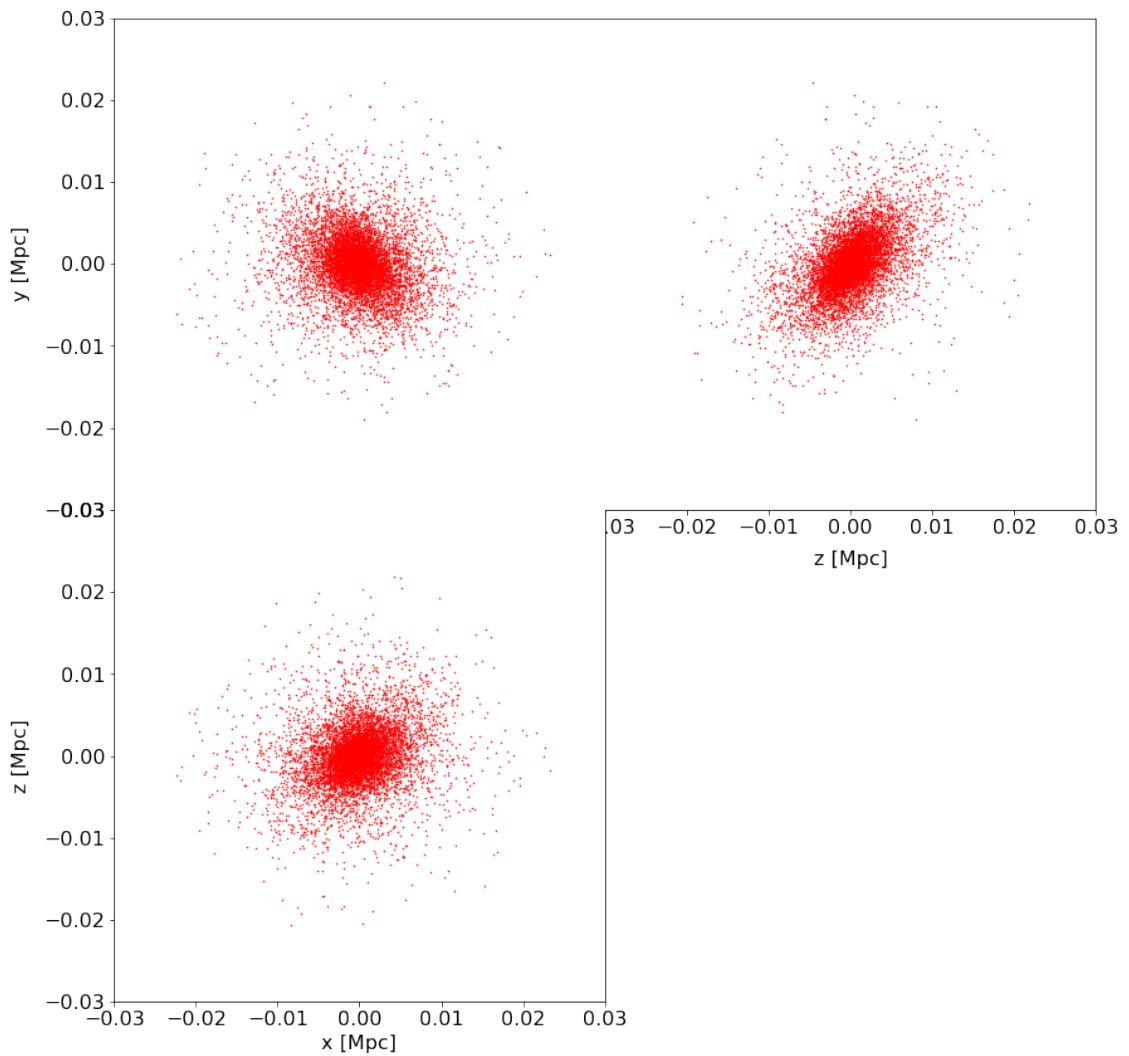
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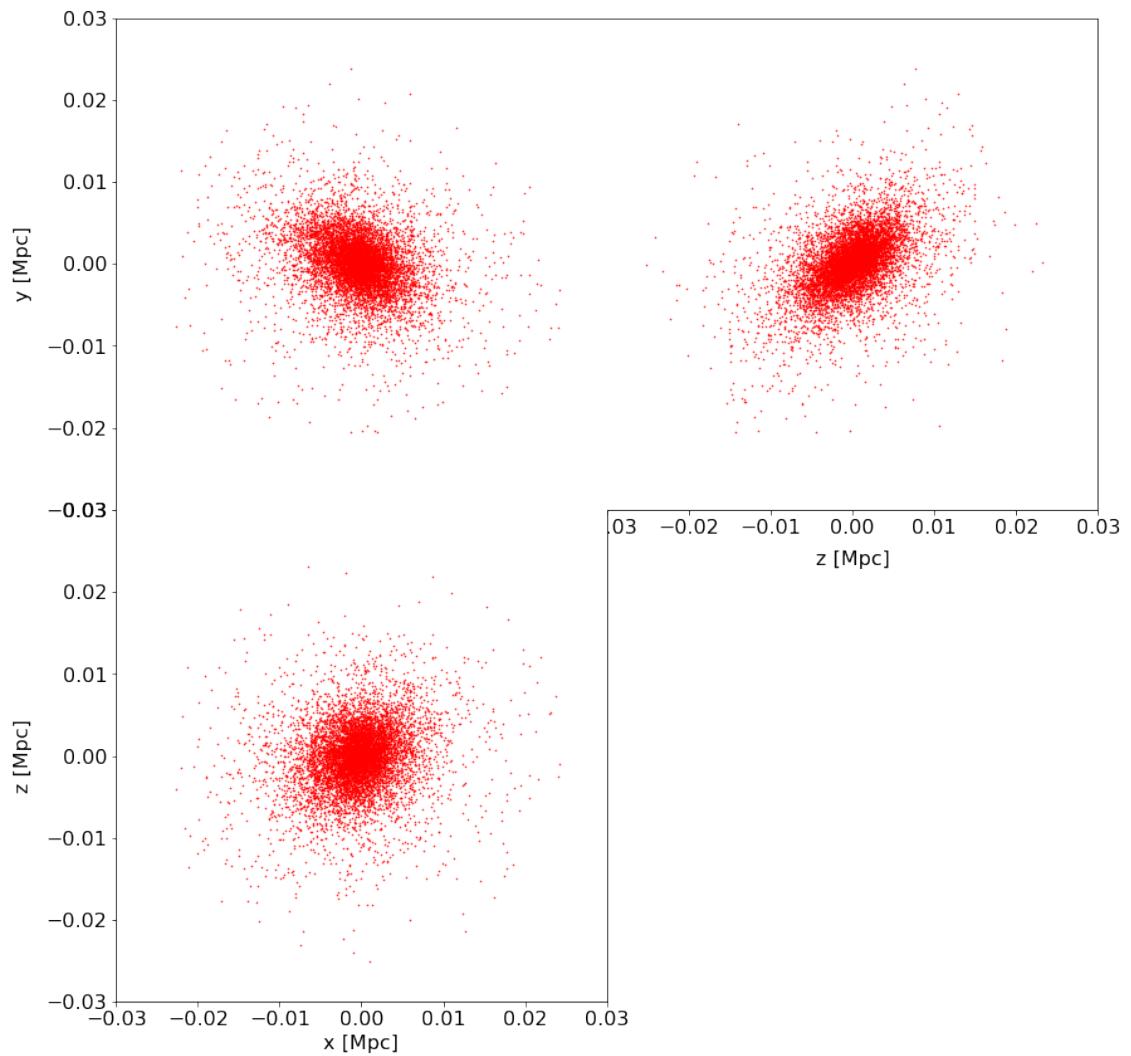
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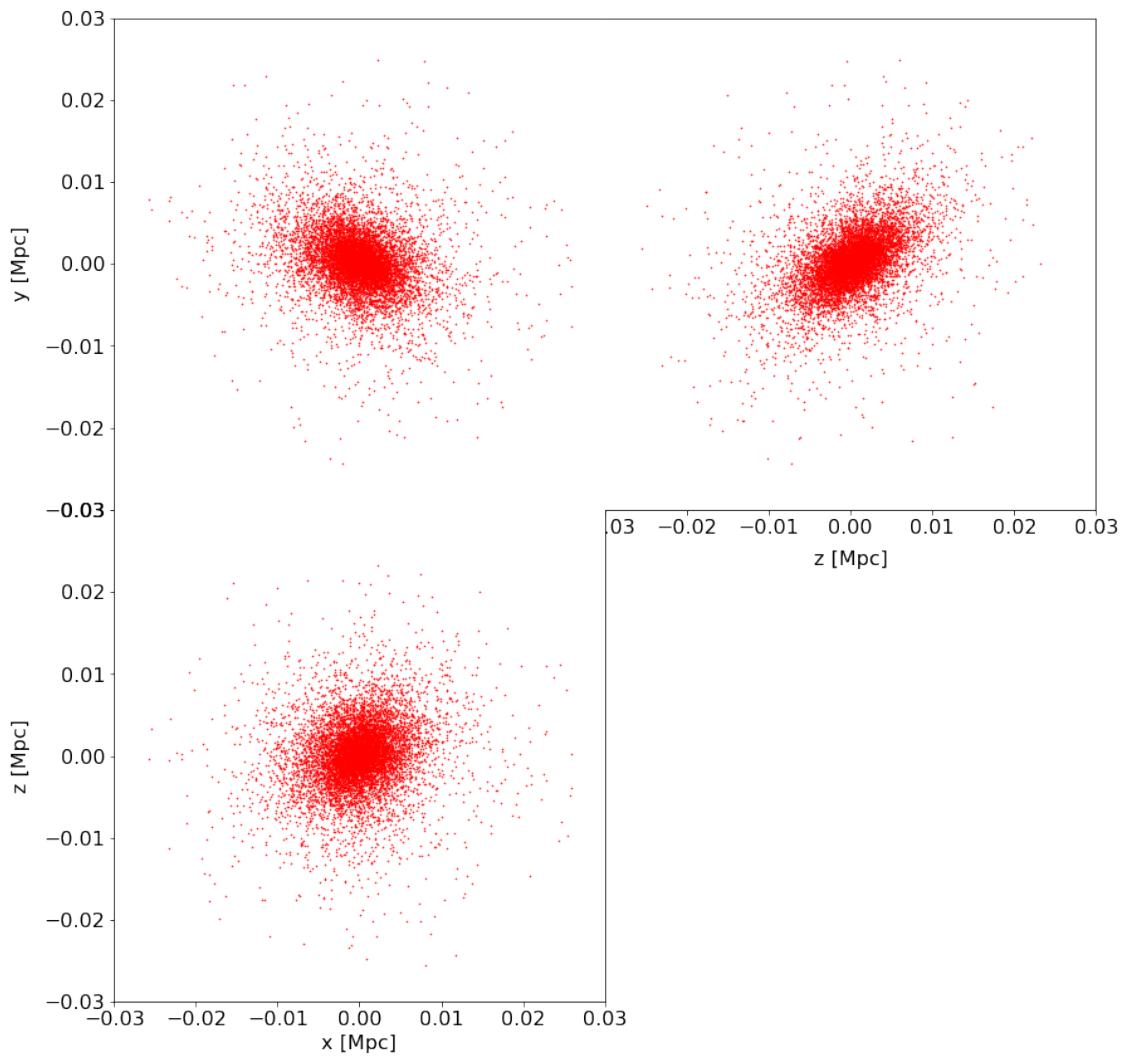
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star_particles_026_z000p183.hdf5



star_particles_027_z000p101.hdf5



star_particles_028_z000p000.hdf5

