fig = plt.figure()

plt.figure(figsize = (24,24))

ax1 = plt.subplot(4,4,(2,12))

x=out[0]

y=out[1]

Z=out[2]

plt.pcolormesh(x, y, Z, vmin=-1700000, vmax=-1575000, cmap='binary')

plt.contour(x,y,Z, levels=contourlevelmanual, cmap='gray')

##########################################################

xx0 = [0,0]

xy0 = [-3.85e8,4.445e8]

plt.plot(xx0, xy0, linestyle='--', color='deepskyblue')

xL2 = [-5e8,0]

yL2 = [4.445e8, 4.445e8]

plt.plot(xL2, yL2, linestyle='--', color='deepskyblue')

xL3 = [-5e8,0]

yL3 = [-3.85e8,-3.85e8]

plt.plot(xL3, yL3, linestyle='--', color='deepskyblue')

xL1 = [-5e8,0]

yL1 = [3.22e8,3.22e8]

plt.plot(xL1, yL1, linestyle='--', color='deepskyblue')

##########################################################

yx0 = [-3.33e8, 3.33e8]

yy0 = [1.87e8, 1.87e8 ]

plt.plot(yx0, yy0, linestyle='--', color='red')

xL4 = [-3.33e8, -3.33e8]

yL4 = [-5e8, 1.87e8]

plt.plot(xL4, yL4, linestyle='--', color='red')

xL5 = [3.33e8, 3.33e8]

yL5 = [-5e8, 1.87e8]

plt.plot(xL5, yL5, linestyle='--', color='red')

plt.ylim(-5e8, 5e8)

plt.xlim(-5e8, 5e8)

ax1.set\_yticks([])

ax1.set\_yticklabels([])

#########################################

ax2 = plt.subplot(4,4,(1,9))

y2 = out[0]

x2 = out[2][:,500]

plt.plot(x2, y2, color='black')

yL2 = [4.445e8, 4.445e8]

xL2 = [-1e10,0]

plt.plot(xL2, yL2, linestyle='--', color='deepskyblue')

yL1 = [3.22e8,3.22e8]

xL1 = [-1e10,0]

plt.plot(xL1, yL1, linestyle='--', color='deepskyblue')

yL3 = [-3.85e8,-3.85e8]

xL3 = [-1e10,0]

plt.plot(xL3, yL3, linestyle='--', color='deepskyblue')

plt.xlim(-0.5e7,-1000000)

plt.ylim(-5e8, 5e8)

ax2.xaxis.tick\_top()

ax2.xaxis.set\_label\_position('top')

ax2.set\_yticks([-5e8, -4e8, -3e8, -2e8, -1e8, 0, 1e8, 2e8, 3e8, 4e8, 5e8,3.228e8, 4.445e8, -3.85e8])

ax2.set\_yticklabels(['-5', '-4','-3','-2','-1','0','1','2','3','4','5','L1','L2','L3'])

ax2.set\_xticks([-1e6,-2e6,-3e6,-4e6, -5e6])

ax2.set\_xticklabels(['-1','-2','-3','-4','-5'])

plt.ylabel('Distance from Centre of Mass along Y/m$\*{10}^{8}$', fontsize=20)

plt.xlabel('Gravitational Potential $\Phi$/J\*kg${}^{-1}\*{10}^{-6}$', fontsize=20)

plt.xticks(fontsize=15)

plt.yticks(fontsize=15)

#########################################

ax3 = plt.subplot(4,4,(14,16))

x3 = out[1]

y3 = out[2][687,:]

plt.plot(x3, y3, color='black')

xL4 = [-3.33e8, -3.33e8]

yL4 = [-1e10,0]

plt.plot(xL4, yL4, linestyle='--', color='red')

xL5 = [3.33e8, 3.33e8]

yL5 = [-1e10,0]

plt.plot(xL5, yL5, linestyle='--', color='red')

plt.xlim(-5e8, 5e8)

plt.ylim(-2500000,-1500000)

ax3.set\_xticks([-5e8, -4e8, -3e8, -2e8, -1e8, 0, 1e8, 2e8, 3e8, 4e8, 5e8, -3.33e8, 3.33e8])

ax3.set\_xticklabels(['-5', '-4','-3','-2','-1','0','1','2','3','4','5','L4','L5'])

ax3.set\_yticks([-1.5e6,-2e6,-2.5e6])

ax3.set\_yticklabels(['-1.5','-2','-2.5'])

ax3.yaxis.tick\_right()

ax3.yaxis.set\_label\_position('right')

plt.xlabel('Distance from Centre of Mass along X/m$\*{10}^{8}$', fontsize=20)

plt.ylabel('Gravitational Potential $\Phi$/J\*kg${}^{-1}\*{10}^{-6}$', fontsize=20)

plt.xticks(fontsize=15)

plt.yticks(fontsize=15)

plt.setp(ax1.get\_xticklabels(), visible=False)

plt.setp(ax1.get\_yticklabels(), visible=False)

plt.subplots\_adjust(hspace=0)

plt.subplots\_adjust(wspace=0)