Figure 12. from

galpy: A python Library for Galactic Dynamics

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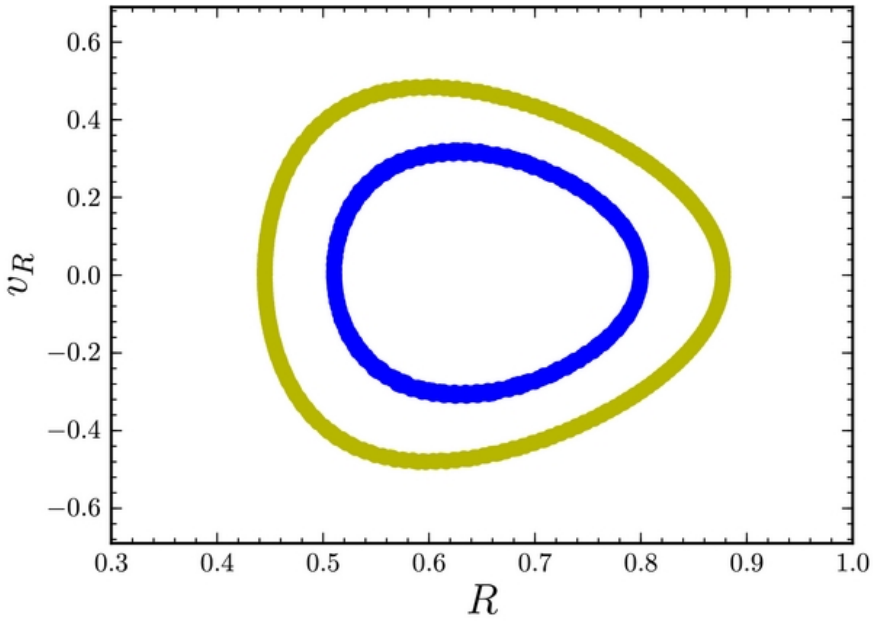


```
def surface_section(Rs,zs,vRs):
  # Find points where the orbit crosses z from - to +
  shiftzs= numpy.roll(zs,-1)
  indx= (zs[:-1] < 0.)*(shiftzs[:-1] > 0.)
  return (Rs[:-1][indx],vRs[:-1][indx])
# Calculate and plot the surface of section
ts= numpy.linspace(0.,1000.,20001) # long integration
o1.integrate(ts,MWPotential2014)
o2.integrate(ts,MWPotential2014)
sect1Rs,sect1vRs=surface_section(o1.R(ts),o1.z(ts),o1.vR(ts))
sect2Rs,sect2vRs=surface_section(o2.R(ts),o2.z(ts),o2.vR(ts))
from matplotlib.pyplot import plot, xlim, ylim
plot(sect1Rs,sect1vRs,'bo',mec='none')
xlim(0.3,1.); ylim(-0.69,0.69)
plot(sect2Rs,sect2vRs,'yo',mec='none')
```