



繪圖(1028)

組員名單

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程式碼

```
import numpy as np
import matplotlib.pyplot as plt
# Head/Antennae/Proboscis
plt.plot([2, 23.3], [143, 216.884], color="black")
plt.plot([23.3, 31.76], [216.884, 233.854], color="black")
plt.plot([31.76, 46.883], [233.854, 249], color="black")

plt.plot([-2, -23.3], [143, 216.884], color="black")
plt.plot([-23.3, -31.76], [216.884, 233.854], color="black")
plt.plot([-31.76, -46.883], [233.854, 249], color="black")

x=np.linspace(-9.28, 9.28, 1000)
y=np.linspace(130, 149, 1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2/19**2+y**2/149**2, [1], colors=["k"])

plt.contour(x,y,x**2+(y-140)**2, [0.5], colors=["orange"])

plt.contour(x,y,(x+2)**2+(y-143)**2, [0.5], colors=["orange"])

plt.contour(x,y,(x-2)**2+(y-143)**2, [0.5], colors=["orange"])

x=np.linspace(-50, 50, 1000)
y=np.linspace(248, 252, 1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-47.833)**2+(y-250)**2, [2], colors=["orange"])

plt.contour(x,y,(x+47.833)**2+(y-250)**2, [2], colors=["orange"])

plt.plot([-9.284, 9.284], [130, 130], color="orange")
# Eyes
x=np.linspace(14.944, -14.944, 1000)
y=np.linspace(149.944, 132.718, 1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-9.55)**2+(y-133.15)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+9.55)**2+(y-133.15)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-9.22)**2+(y-134.41)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+9.39)**2+(y-133.78)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-9.39)**2+(y-133.78)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+9.22)**2+(y-134.41)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-8.88)**2+(y-135.68)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+8.88)**2+(y-135.68)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+8.7)**2+(y-136.302)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-8.7)**2+(y-136.302)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+9.06)**2+(y-135.05)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-9.06)**2+(y-135.05)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+8.52)**2+(y-136.93)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-8.52)**2+(y-136.93)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+8.33)**2+(y-137.55)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-8.33)**2+(y-137.55)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+8.14)**2+(y-138.18)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-8.14)**2+(y-138.18)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+7.94)**2+(y-138.8)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-7.94)**2+(y-138.8)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+7.73)**2+(y-139.41)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-7.73)**2+(y-139.41)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+7.52)**2+(y-140.02)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-7.52)**2+(y-140.02)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+7.31)**2+(y-140.63)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-7.31)**2+(y-140.63)**2, [0.1], colors=["k"])
plt.contour(x,y,(x+7.09)**2+(y-141.24)**2, [0.1], colors=["k"])
plt.contour(x,y,(x-7.09)**2+(y-141.24)**2, [0.1], colors=["k"])
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[illegible]

[illegible]

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plt.contour(x,y,(x-10.45)**2+(y-140.58)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+10.24)**2+(y-141.25)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-10.24)**2+(y-141.25)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.95)**2+(y-141.9)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.95)**2+(y-141.9)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.72)**2+(y-142.55)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.72)**2+(y-142.55)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.51)**2+(y-143.15)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.51)**2+(y-143.15)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.28)**2+(y-143.85)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.28)**2+(y-143.85)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9)**2+(y-144.52)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9)**2+(y-144.52)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+8.7)**2+(y-145.17)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-8.7)**2+(y-145.17)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+8.4)**2+(y-145.8)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-8.4)**2+(y-145.8)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+8.1)**2+(y-146.47)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-8.1)**2+(y-146.47)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+7.78)**2+(y-147.08)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-7.78)**2+(y-147.08)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+7.4)**2+(y-147.74)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-7.4)**2+(y-147.74)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+7)**2+(y-148.38)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-7)**2+(y-148.38)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+6.58)**2+(y-149)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-6.58)**2+(y-149)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+6.02)**2+(y-149.65)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-6.02)**2+(y-149.65)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12.64)**2+(y-135.22)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12.64)**2+(y-135.22)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12.5)**2+(y-135.88)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12.5)**2+(y-135.88)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12.36)**2+(y-136.6)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12.36)**2+(y-136.6)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12.1)**2+(y-137.3)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12.1)**2+(y-137.3)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+11.91)**2+(y-137.96)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-11.91)**2+(y-137.96)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+11.7)**2+(y-138.57)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-11.7)**2+(y-138.57)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+11.5)**2+(y-139.22)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-11.5)**2+(y-139.22)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+11.32)**2+(y-139.84)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-11.32)**2+(y-139.84)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+11.1)**2+(y-140.5)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-11.1)**2+(y-140.5)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+10.87)**2+(y-141.1)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-10.87)**2+(y-141.1)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+10.6)**2+(y-141.8)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-10.6)**2+(y-141.8)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+10.4)**2+(y-142.43)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-10.4)**2+(y-142.43)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+10.2)**2+(y-143.07)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-10.2)**2+(y-143.07)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.93)**2+(y-143.68)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.93)**2+(y-143.68)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.68)**2+(y-144.4)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.68)**2+(y-144.4)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.4)**2+(y-145.1)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.4)**2+(y-145.1)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.1)**2+(y-145.75)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.1)**2+(y-145.75)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+8.8)**2+(y-146.4)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-8.8)**2+(y-146.4)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+8.45)**2+(y-147.06)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-8.45)**2+(y-147.06)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+8.1)**2+(y-147.7)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-8.1)**2+(y-147.7)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+7.65)**2+(y-148.34)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-7.65)**2+(y-148.34)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+7.25)**2+(y-149)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-7.25)**2+(y-149)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+6.7)**2+(y-149.67)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-6.7)**2+(y-149.67)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+6.7)**2+(y-149.67)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-7.4)**2+(y-149.68)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+7.4)**2+(y-149.68)**2,[0.1],colors=["k"])
# plt.contour(x,y,(x-8.5)**2,(y-148.4)**2,[0.2],colors=["k"])
# plt.contour(x,y,(x-8.5)**2/2,(y-148.4)**2/6,[0.1],colors=["k"])
plt.contour(x,y,(x-13.15)**2+(y-135.67)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.15)**2+(y-135.67)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-13)**2+(y-136.35)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13)**2+(y-136.35)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-13.2)**2+(y-137.65)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12.87)**2+(y-137.15)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-13.63)**2+(y-136.12)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.63)**2+(y-136.12)**2,[0.1],colors=["k"])

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plt.contour(x,y,(x-13.85)**2+(y-142.95)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.85)**2+(y-142.95)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-13.56)**2+(y-143.63)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.56)**2+(y-143.63)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-13.24)**2+(y-144.3)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.24)**2+(y-144.3)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-13)**2+(y-144.98)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13)**2+(y-144.98)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12.65)**2+(y-145.65)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12.65)**2+(y-145.65)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12.32)**2+(y-146.45)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12.32)**2+(y-146.45)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12)**2+(y-147.03)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12)**2+(y-147.03)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.53)**2+(y-148.68)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.53)**2+(y-148.68)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-10.18)**2+(y-148.6)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+10.18)**2+(y-148.6)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-10.83)**2+(y-148.54)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+10.83)**2+(y-148.54)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-11.75)**2+(y-147.8)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+11.75)**2+(y-147.8)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.92)**2+(y-149.2)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.92)**2+(y-149.2)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-15.1)**2+(y-140.89)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-14.89)**2+(y-141.48)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+14.89)**2+(y-141.48)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-14.73)**2+(y-142.1)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+14.73)**2+(y-142.1)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-14.49)**2+(y-142.79)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+14.49)**2+(y-142.79)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-14.19)**2+(y-143.5)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+14.19)**2+(y-143.5)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-13.88)**2+(y-144.2)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.88)**2+(y-144.2)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-13.65)**2+(y-144.83)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.65)**2+(y-144.83)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-13.31)**2+(y-145.57)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.31)**2+(y-145.57)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12.94)**2+(y-146.24)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12.94)**2+(y-146.24)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12.65)**2+(y-147.01)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12.65)**2+(y-147.01)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12.35)**2+(y-147.6)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+12.35)**2+(y-147.6)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-8.52)**2+(y-149.12)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+8.52)**2+(y-149.12)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-8.89)**2+(y-148.75)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+8.89)**2+(y-148.75)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-8.7)**2+(y-149.74)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+8.7)**2+(y-149.74)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-9.22)**2+(y-149.32)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+9.22)**2+(y-149.32)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-14.82)**2+(y-143.35)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+14.82)**2+(y-143.35)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-14.53)**2+(y-144.07)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+14.53)**2+(y-144.07)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-14.3)**2+(y-144.71)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+14.3)**2+(y-144.71)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-13.95)**2+(y-145.42)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.95)**2+(y-145.42)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+8.38)**2+(y-148.32)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.69)**2+(y-138.14)**2,[0.1],colors=["k"])
plt.contour(x,y,(x+13.22)**2+(y-137.69)**2,[0.1],colors=["k"])
plt.contour(x,y,(x-12.8)**2+(y-137.11)**2,[0.1],colors=["k"])

x=np.linspace(-9.823,-2.1945,1000)
y=np.linspace(132.914,115.593,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+6)**2+(y-141)**2,[80],colors=["k"])
x=np.linspace(-9.823,-9.325,1000)
y=np.linspace(132.914,115.593,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+6)**2+(y-141)**2,[80],colors=["k"])
x=np.linspace(2.194,9.823,1000)
y=np.linspace(132.914,149.094,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-6)**2+(y-141)**2,[80],colors=["k"])
x=np.linspace(9.325,9.823,1000)
y=np.linspace(132.697,132.914,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-6)**2+(y-141)**2,[80],colors=["k"])
# Thorax
plt.plot ([-10,0],[127,125],color="black")
plt.plot ([0,10],[125,127],color="black")
plt.plot ([-10,-12],[127,115.6],color="black")

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```

x=np.linspace(-17,17,1000)
y=np.linspace(-69,115.593,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-0)**2+(y-120)**2,[163.45],color="black")

x=np.linspace(-20,0,1000)
y=np.linspace(17,20,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+20)**2/400+(y-20)**2/9,[1],color="black")

x=np.linspace(0,20,1000)
y=np.linspace(17,20,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-20)**2/400+(y-20)**2/9,[1],color="black")

x=np.linspace(-19.079,-12,1000)
y=np.linspace(45,56,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+0)**2/364+(y-45)**2/200,[1],color="black")

x=np.linspace(12,19.079,1000)
y=np.linspace(45,56,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+0)**2/364+(y-45)**2/200,[1],color="black")

plt.plot ([-12.544,-16.95],[115.585,65.994],color="black")
plt.plot ([16.94,12],[66.095,115.305],color="black")

x=np.linspace(13.544,0,1000)
y=np.linspace(100.135,53.932,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,4500*(x+3)**2+300*(y-120)**2,[1350000],color="black")

x=np.linspace(-13.544,0,1000)
y=np.linspace(100.135,53.932,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,4500*(x-3)**2+300*(y-120)**2,[1350000],color="black")

plt.plot ([0,0],[105,53.932],color="black")
plt.plot ([12,16.9],[56,65.8],color="black")
plt.plot ([0,12],[50,56],color="black")
plt.plot ([0,-11.995],[50,55.998],color="black")

plt.plot ([-19.079,19.079],[45,45],color="black")
plt.plot ([-19.448,19.448],[35,35],color="black")
plt.plot ([-12,-16.8],[56,65.6],color="black")
plt.plot ([12,10],[115.593,127],color="black")

x=np.linspace(-15,-18.6,1000)
y=np.linspace(-68.234,-55.7,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,500*(x+0)**2+346.3*(y+55)**2,[173150],color="black")

x=np.linspace(15,18.6,1000)
y=np.linspace(-68.234,-55.7,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,500*(x+0)**2+346.3*(y+55)**2,[173150],color="black")
# Abdomen
plt.plot([10,10],[-73.75,-84.103],color="black")
plt.plot([-10,-10],[-73.75,-84.103],color="black")
plt.plot([10,11],[-73.75,-83.75],color="black")
plt.plot([-10,-11],[-73.75,-83.75],color="black")
plt.plot([14,18],[-33,-41],color="black")
plt.plot([-14,-18],[-33,-41],color="black")
plt.plot([10,19.449],[-28.667,-35.1],color="black")
plt.plot([-10,-19.449],[-28.667,-35.1],color="black")
plt.plot([-19,-15],[-22.5,-20.5],color="black")
plt.plot([19,15],[-22.5,-20.5],color="black")
plt.plot([-19,-15],[-10.8,-10],color="black")
plt.plot([19,15],[-10.8,-10],color="black")
plt.plot([-10,10],[-40,-40],color="black")
plt.plot([-10,-15],[-40,-42.5],color="black")
plt.plot([10,15],[-40,-42.5],color="black")
plt.plot([12,18],[-49.4,-50.6],color="black")
plt.plot([-12,-18],[-49.4,-50.6],color="black")

x=np.linspace(-14.892,-11,1000)
y=np.linspace(-82,-83.751,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2+(y+54.1035)**2,[1000],colors=["k"])

x=np.linspace(14.892,11,1000)
y=np.linspace(-82,-83.751,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2+(y+54.1035)**2,[1000],colors=["k"])

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x=np.linspace(-10,10,1000)
y=np.linspace(-84,-85.726,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2+(y+54.1035)**2,[1000],colors=["k"])

x=np.linspace(-15,-16.5,1000)
y=np.linspace(-68.234,-82,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2+(y+75)**2,[270.78],colors=["k"])

x=np.linspace(15,16.5,1000)
y=np.linspace(-68.234,-82,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2+(y+75)**2,[270.78],colors=["k"])

x=np.linspace(-19.994,19.994,1000)
y=np.linspace(-61.148,-0.052,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2+(y+63)**2,[3906],colors=["k"])
plt.contour(x,y,x**2+(y+49)**2,[2000],colors=["k"])
plt.contour(x,y,x**2+(y+48)**2,[1250],colors=["k"])
plt.contour(x,y,x**2+(y+55)**2,[1000],colors=["k"])
plt.contour(x,y,x**2+(y+96)**2,[2000],colors=["k"])
plt.contour(x,y,x**2+(y+115)**2,[3000],colors=["k"])

x=np.linspace(-17.361,-13,1000)
y=np.linspace(-63.052,-61.8,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2+(y+115)**2,[3000],colors=["k"])

x=np.linspace(17.361,13,1000)
y=np.linspace(-63.052,-61.8,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2+(y+115)**2,[3000],colors=["k"])

x=np.linspace(-18.61,-15,1000)
y=np.linspace(-55.709,-68.234,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2/346.3+(y+55)**2/500,[1],colors=["k"])

x=np.linspace(18.61,15,1000)
y=np.linspace(-55.709,-68.234,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2/346.3+(y+55)**2/500,[1],colors=["k"])

x=np.linspace(-20,20,1000)
y=np.linspace(-54.944,150,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2/20**2+y**2/150**2,[1],colors=["k"])
# Left Wing
plt.plot([-58,-58],[95.076,150.937],"r")
plt.plot([-30.624,-41.246],[124.128,92.262],"r")
x = np.linspace(-58,-30.623,1000)
y = np.linspace(150.937,124.126,1000)
x,y = np.meshgrid(x,y)
plt.contour(x,y,50000*(x+300)**2 + 100000*(y-7)**2,[5000000000],color="r")
x = np.linspace(-58,-41.3,1000)
y = np.linspace(95.076,92.269,1000)
x,y = np.meshgrid(x,y)
plt.contour(x,y,25000*(x-70)**2 + 120000*(y-242)**2,[3000000000],color="r")
plt.plot([-60,-60],[93.442,155.6],"orange")
plt.plot([-28.465,-39.978],[124.605,90.066],"orange")
x = np.linspace(-60,-28.465,1000)
y = np.linspace(155.6,124.605,1000)
x,y = np.meshgrid(x,y)
plt.contour(x,y,50000*(x+300)**2 + 100000*(y-10)**2,[5000000000],color="orange")
x = np.linspace(-60,-40,1000)
y = np.linspace(93.442,90.069,1000)
x,y = np.meshgrid(x,y)
plt.contour(x,y,25000*(x-70)**2 + 120000*(y-240)**2,[3000000000],color="orange")

#左右2方格
plt.plot([-106,-106],[183.5,105.9],"r")
plt.plot([-82,-82],[168.9,100],"r")
x = np.linspace(-82,-106,1000)
y = np.linspace(100,105.814,1000)
x,y = np.meshgrid(x,y)
plt.contour(x,y,25000*(x-70)**2 + 120000*(y-242)**2,[3000000000],color="r")
x = np.linspace(-106,-82,1000)
y = np.linspace(183.584,168.981,1000)
x,y = np.meshgrid(x,y)
plt.contour(x,y,50000*(x+300)**2 + 100000*(y-7)**2,[5000000000],color="r")

plt.plot([-108,-108],[187.674,104.4],"orange")
plt.plot([-80,-80],[170.6,97.5],"orange")
x = np.linspace(-108,-80,1000)
y = np.linspace(104.356,97.478,1000)

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x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x-70)**2 + 120000*(y - 240)**2, [3000000000], color = "orange")
x = np.linspace(-108, -80, 1000)
y = np.linspace(187.674, 170.624, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x+300)**2 + 100000*(y - 10)**2, [5000000000], color = "orange")

#左右3方格
plt.plot([-141.85, -154.505], [116.95, 205.534], "r")
plt.plot([-127, -127], [111.943, 194.1], "r")
x = np.linspace(-154.505, -127, 1000)
y = np.linspace(205.543, 194.1, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x+300)**2 + 100000*(y - 7)**2, [5000000000], color = "r")
x = np.linspace(-127, -141.85, 1000)
y = np.linspace(111.943, 116.95, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x-70)**2 + 120000*(y - 242)**2, [3000000000], color = "r")

plt.plot([-143.7, -157.066], [115.9, 209.462], "orange")
plt.plot([-125, -125], [109.6, 196.2], "orange")
x = np.linspace(-157.066, -125, 1000)
y = np.linspace(209.462, 196.246, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x+300)**2 + 100000*(y - 10)**2, [5000000000], color = "orange")
x = np.linspace(-143.4, -125, 1000)
y = np.linspace(115.45, 109.31, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x-70)**2 + 120000*(y - 240)**2, [3000000000], color = "orange")

#左右4方格
plt.plot([-187, -187], [215.84, 135.982], "r")
plt.plot([-160, -173], [124, 211.769], "r")
x = np.linspace(-173, -187, 1000)
y = np.linspace(211.769, 215.84, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x+300)**2 + 100000*(y - 7)**2, [5000000000], color = "r")
x = np.linspace(-187, -160.4, 1000)
y = np.linspace(136, 124, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x-70)**2 + 120000*(y - 242)**2, [3000000000], color = "r")

plt.plot([-189, -189], [219.3, 135], "orange")
plt.plot([-158, -171.3], [121, 214], "orange")
x = np.linspace(-189, -171.3, 1000)
y = np.linspace(219.3, 214, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x+300)**2 + 100000*(y - 10)**2, [5000000000], color = "orange")
x = np.linspace(-189, -158, 1000)
y = np.linspace(135, 121, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x-70)**2 + 120000*(y - 240)**2, [3000000000], color = "orange")

#左右5方格
plt.plot([-229, -229], [224.898, 162.2], "r")
plt.plot([-206, -206], [220.5, 146.45], "r")
x = np.linspace(-229, -206, 1000)
y = np.linspace(224.898, 220.5, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x+300)**2 + 100000*(y - 7)**2, [5000000000], color = "r")
x = np.linspace(-229, -206, 1000)
y = np.linspace(162.2, 146.45, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x-70)**2 + 120000*(y - 242)**2, [3000000000], color = "r")

plt.plot([-231, -231], [228.219, 161.739], "orange")
plt.plot([-204, -204], [223, 143.3], "orange")
x = np.linspace(-231, -204, 1000)
y = np.linspace(228.219, 223, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x+300)**2 + 100000*(y - 10)**2, [5000000000], color = "orange")
x = np.linspace(-231, -204, 1000)
y = np.linspace(161.739, 143.3, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x-70)**2 + 120000*(y - 240)**2, [3000000000], color = "orange")

#左右6方格
plt.plot([-271, -271], [229.65, 214.165], "r")
plt.plot([-247, -247], [227.444, 178.244], "r")
x = np.linspace(-271, -247, 1000)
y = np.linspace(229.65, 227.444, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x+300)**2 + 100000*(y - 7)**2, [5000000000], color = "r")
x = np.linspace(-271, -247, 1000)
y = np.linspace(214.165, 178.244, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x-70)**2 + 120000*(y - 242)**2, [3000000000], color = "r")

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plt.plot([-273,-273],[232.79,217.9],"orange")
plt.plot([-245,-245],[230.199,174.212],"orange")
x = np.linspace(-273,-245, 1000)
y = np.linspace(232.79,230.199, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x+300)**2 + 100000*(y - 10)**2,[5000000000],color = "orange")
x = np.linspace(-273, -245, 1000)
y = np.linspace(217.869, 174.212, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,25000*(x-70)**2 + 120000*(y - 240)**2,[3000000000],color = "orange")

#上1黑
x = np.linspace(-300, -375, 1000)
y = np.linspace(246.807,240.427, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x+300)**2 + 100000*(y - 23.2)**2,[5000000000],color = "k")
x = np.linspace(-300, -12.602, 1000)
y = np.linspace(246.807, 116.48, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x+300)**2 + 100000*(y - 23.2)**2,[5000000000],color = "k")

#上2藍
x = np.linspace(-300, -13.621, 1000)
y = np.linspace(238.607, 109.834, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x+300)**2 + 100000*(y -15)**2,[5000000000],color = "blue")
x = np.linspace(-347.638, -300, 1000)
y = np.linspace(236.059, 238.607, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x+300)**2 + 100000*(y -15)**2,[5000000000],color = "blue")

#下1黑
x = np.linspace(-285.717, -17.4, 1000)
y = np.linspace(220, 75.883, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,25000*(x-60)**2 + 120000*(y -230)**2,[3000000000],color = "k")

#左1黑
x = np.linspace(-374.998, -400, 1000)
y = np.linspace(240.427, 228.138, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+360)**2/2892 + (y -200)**2/1772.2,[1],color = "k")
x = np.linspace(-400, -413.777, 1000)
y = np.linspace(228.138, 200, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+360)**2/2892 + (y -200)**2/1772.2,[1],color = "k")

#左2黑
x = np.linspace(-413.777, -380.053, 1000)
y = np.linspace(200, 153.146, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+360)**2/3000 + (y -212)**2/4000,[1],color = "k")

#左3黑
x = np.linspace(-380.05, -369.525, 1000)
y = np.linspace(153.145, 144.443, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+382.65)**2/175 + (y -143.17)**2/103.5,[1],color = "k")

#左4黑
x = np.linspace(-369.525, -300, 1000)
y = np.linspace(144.443, 65, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+300)**2/115 + (y -197.25)**2/350,[50],color = "k")

#下黑線
plt.plot([-300,-120],[65,65],"k")

#下右黑線
plt.plot([-120,-50],[65,60],"k")

#下右右黑線
plt.plot([-18.33,-50],[60,60],"k")

#藍1
plt.plot([-347.638,-320],[236.055,225],"b")

#藍2
plt.plot([-350,-320],[213,225],"b")

#藍3
plt.plot([-350,-315],[213,199],"b")

#藍4
plt.plot([-345,-315],[187,199],"b")

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#藍5
plt.plot([-345, -295], [187, 167], "b")

#藍6
plt.plot([-320, -295], [157, 167], "b")

#藍7
plt.plot([-320, -270], [157, 137], "b")

#藍8
plt.plot([-305, -270], [123, 137], "b")

#藍9
plt.plot([-305, -265], [123, 107], "b")

#藍10
plt.plot([-300, -265], [93, 107], "b")

#藍11
plt.plot([-300, -255], [93, 75], "b")

#黑1
plt.plot([-320, -286], [225, 220], "k")

#黑2
plt.plot([-315, -279.687], [199, 199], "k")

#黑3
plt.plot([-295, -263.389], [167, 173.322], "k")

#黑4
plt.plot([-270, -236.434], [137, 148.189], "k")

#黑5
plt.plot([-265, -197.024], [107, 123.994], "k")

#黑6
plt.plot([-255, -134.129], [74.915, 99.047], "k")

#圓圓
x=np.linspace(-410, -293, 1000)
y=np.linspace(73, 232, 1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+385)**2/15+(y-225)**2/15,[1],colors=["k"])
plt.contour(x,y,(x+405)**2/25+(y-205)**2/25,[1],colors=["k"])
plt.contour(x,y,(x+375)**2/70+(y-205)**2/70,[1],colors=["k"])
plt.contour(x,y,(x+355)**2/45+(y-225)**2/45,[1],colors=["k"])
plt.contour(x,y,(x+360)**2/90+(y-185)**2/50,[1],colors=["k"])
plt.contour(x,y,(x+395)**2/35+(y-185)**2/35,[1],colors=["k"])
plt.contour(x,y,(x+370)**2/30+(y-165)**2/30,[1],colors=["k"])
plt.contour(x,y,(x+345)**2/80+(y-165)**2/65,[1],colors=["k"])
plt.contour(x,y,(x+358)**2/30+(y-140)**2/30,[1],colors=["k"])
plt.contour(x,y,(x+335)**2/80+(y-140)**2/50,[1],colors=["k"])
plt.contour(x,y,(x+350)**2/28+(y-120)**2/28,[1],colors=["k"])
plt.contour(x,y,(x+325)**2/70+(y-120)**2/60,[1],colors=["k"])
plt.contour(x,y,(x+338)**2/20+(y-100)**2/20,[1],colors=["k"])
plt.contour(x,y,(x+312)**2/65+(y-100)**2/55,[1],colors=["k"])
plt.contour(x,y,(x+320)**2/15+(y-80)**2/15,[1],colors=["k"])
plt.contour(x,y,(x+300)**2/45+(y-80)**2/45,[1],colors=["k"])
x=np.linspace(-108, -85, 1000)
y=np.linspace(-105, -235, 1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+97)**2/68+(y+115)**2/45,[1],colors=["b"])
plt.contour(x,y,(x+101)**2+(y+126.5)**2,[18],colors=["b"])
plt.contour(x,y,(x+102)**2+(y+136)**2,[12],colors=["b"])
plt.contour(x,y,(x+102.1)**2+(y+144.5)**2,[9],colors=["b"])
plt.contour(x,y,(x+102.2)**2+(y+152.8)**2,[8],colors=["b"])
plt.contour(x,y,(x+102.2)**2+(y+160.8)**2,[8],colors=["b"])
plt.contour(x,y,(x+102.2)**2+(y+169)**2,[8],colors=["b"])
plt.contour(x,y,(x+102.3)**2+(y+177)**2,[8],colors=["b"])
plt.contour(x,y,(x+102.4)**2+(y+185.2)**2,[8],colors=["b"])
plt.contour(x,y,(x+102.5)**2+(y+193)**2,[9],colors=["b"])
plt.contour(x,y,(x+102.7)**2+(y+200.8)**2,[10],colors=["b"])
plt.contour(x,y,(x+103)**2+(y+209)**2,[12],colors=["b"])
plt.contour(x,y,(x+103.2)**2+(y+218)**2,[15],colors=["b"])
plt.contour(x,y,(x+103.5)**2/18+(y+228)**2/18,[1],colors=["b"])

x=np.linspace(-225, -43, 1000)
y=np.linspace(-25, -130, 1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+51)**2/35+(y+118)**2/57,[1],colors=["b"])
plt.contour(x,y,(x+68)**2/400+(y+94)**2/230,[1],colors=["r"])
plt.contour(x,y,(x+68)**2/500+(y+94)**2/300,[1],colors=["orange"])
x=np.linspace(-225, -43, 1000)
y=np.linspace(-77, -85, 1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+137)**2/55+(y+85)**2/55,[1],colors=["orange"])

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x=np.linspace(-225,-43,1000)
y=np.linspace(-79,-83,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+137)**2/30+(y+85)**2/30,[1],colors=["r"])
x=np.linspace(-225,-43,1000)
y=np.linspace(-52,-60,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+177)**2/55+(y+60)**2/55,[1],colors=["orange"])
x=np.linspace(-225,-43,1000)
y=np.linspace(-54,-58,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+177)**2/30+(y+60)**2/30,[1],colors=["r"])
x=np.linspace(-225,-43,1000)
y=np.linspace(-27,-35,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+217)**2/55+(y+35)**2/55,[1],colors=["orange"])
x=np.linspace(-225,-43,1000)
y=np.linspace(-29,-33,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+217)**2/30+(y+35)**2/30,[1],colors=["r"])
x=np.linspace(-98.4,-112,1000)
y=np.linspace(-240,-248,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+105)**2/43+(y+239)**2/80,[1],colors=["b"])
plt.plot([-98.484,-98.484],[-234.294,-240],color="b")

x=np.linspace(-110,-111.507,1000)
y=np.linspace(-234.294,-240.108,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+104.95)**2/43+(y+240)**2/80,[1],colors=["b"])

plt.plot([-109.98,-98.484],[-234.294,-234.294],color="b")

plt.plot([-142.08,-131.92],[-83,-83],color="r")
plt.plot([-144.417,-129.584],[-85,-85],color="orange")
plt.plot([-182.073,-171.94],[-58,-58],color="r")
plt.plot([-184.4,-169.61],[-60,-60],color="orange")
plt.plot([-222.07,-211.91],[-33,-33],color="r")
plt.plot([-224.41,-209.59],[-35,-35],color="orange")

#下藍1
x = np.linspace(-254.787, -180, 1000)
y = np.linspace(74.915, 79.142, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+180)**2/11000 + (y -65)**2/200,[1],color = "blue")

#下藍2
plt.plot([-180,-143.4],[79.07,79.07],"b")

#下藍3
x = np.linspace(-143.4, -81.243, 1000)
y = np.linspace(79.07, 72.116, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+144.48)**2/4000 + (y -72)**2/50,[1],color = "blue")

#下藍4
x = np.linspace(-18.212, -81.243, 1000)
y = np.linspace(62, 72.116, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+18)**2/4000 + (y -72)**2/100,[1],color = "blue")

#下半左1黑
x = np.linspace(-132.314, -218.758, 1000)
y = np.linspace(65, 0, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+100)**2/16401 + (y +41)**2/12000,[1],color = "k")
x = np.linspace(-218.758, -228.066, 1000)
y = np.linspace(0, -41.263, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+100)**2/16401 + (y +41)**2/12000,[1],color = "k")

#下半左2黑
x = np.linspace(-26.245, -193.086, 1000)
y = np.linspace(60, 1.428, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-30)**2/56215 + (y +30)**2/8583,[1],color = "k")

#下半左3黑
x = np.linspace(-24.966, -140.766, 1000)
y = np.linspace(60, -28.576, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-50)**2/37605 + (y +50)**2/14226,[1],color = "k")

#下半左4黑
x = np.linspace(-20.781, -79.5, 1000)
y = np.linspace(60, -49.401, 1000)
x, y = np.meshgrid(x, y)

```



```

plt.contour(x, y, (x+19.823)**2/3600 + (y +62.05)**2/14900, [1], color = "k")

#下半左5黑
x = np.linspace(-19.812, -31.597, 1000)
y = np.linspace(60, -68.008, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-0)**2/1000 + (y +75)**2/30000, [1], color = "k")
x = np.linspace(-31.597, -31.62, 1000)
y = np.linspace(-68.008, -77.295, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-0)**2/1000 + (y +75)**2/30000, [1], color = "k")
x = np.linspace(-31.597, -31.62, 1000)
y = np.linspace(-68.008, -72.705, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-0)**2/1000 + (y +75)**2/30000, [1], color = "k")
x = np.linspace(-31.62, -31.65, 1000)
y = np.linspace(-72.705, -77.295, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-0)**2/1000 + (y +75)**2/30000, [1], color = "k")
x = np.linspace(-31.62, -31.61, 1000)
y = np.linspace(-72.705, -79.923, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-0)**2/1000 + (y +75)**2/30000, [1], color = "k")
x = np.linspace(-31.61, -31.292, 1000)
y = np.linspace(-79.923, -99.999, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-0)**2/1000 + (y +75)**2/30000, [1], color = "k")

#下半左6黑
x = np.linspace(-79.5, -84.95, 1000)
y = np.linspace(-50, -73.876, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+88)**2/71.75 + (y +50)**2/655, [1], color = "k")

#下半部右蓋
x = np.linspace(-31.6, -40, 1000)
y = np.linspace(-78.556, -70.093, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+60)**2/900 + (y +85)**2/400, [1], color = "k")
x = np.linspace(-40, -60, 1000)
y = np.linspace(-70.093, -65, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+60)**2/900 + (y +85)**2/400, [1], color = "k")
x = np.linspace(-60, -80, 1000)
y = np.linspace(-65, -70.093, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+60)**2/900 + (y +85)**2/400, [1], color = "k")
x = np.linspace(-80, -85, 1000)
y = np.linspace(-70.093, -73.945, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+60)**2/900 + (y +85)**2/400, [1], color = "k")

#下半部右2蓋
x = np.linspace(-84.976, -81.54, 1000)
y = np.linspace(-73.92, -60.296, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+97.35)**2/250 + (y +60)**2/500, [1], color = "k")
x = np.linspace(-81.54, -81.54, 1000)
y = np.linspace(-59.704, -60.296, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+97.35)**2/250 + (y +60)**2/500, [1], color = "k")
x = np.linspace(-81.54, -97.35, 1000)
y = np.linspace(-59.704, -37.639, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+97.35)**2/250 + (y +60)**2/500, [1], color = "k")
x = np.linspace(-81.54, -97.35, 1000)
y = np.linspace(-59.704, -37.639, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+97.35)**2/250 + (y +60)**2/500, [1], color = "k")
x = np.linspace(-104.4, -97.35, 1000)
y = np.linspace(-39.985, -37.639, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+97.35)**2/250 + (y +60)**2/500, [1], color = "k")

#下半部右3蓋
x = np.linspace(-104.44, -116.75, 1000)
y = np.linspace(-40.012, -42.472, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+116.75)**2/190 + (y +38)**2/20, [1], color = "k")

#下半部右4蓋
x = np.linspace(-116.75, -128.956, 1000)
y = np.linspace(-42.472, -29.493, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+116.75)**2/150 + (y +28.33)**2/200, [1], color = "k")

#下半部右5蓋

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x = np.linspace(-128.97, -135, 1000)
y = np.linspace(-29.412, -25.528, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+135)**2/37 + (y +30)**2/20, [1], color = "k")
x = np.linspace(-140.766, -135, 1000)
y = np.linspace(-28.576, -25.528, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+135)**2/37 + (y +30)**2/20, [1], color = "k")

#下半部左蓋
x = np.linspace(-197.78, -187.68, 1000)
y = np.linspace(29.744, 14.133, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+205)**2/300 + (y -14)**2/300, [1], color = "k")
x = np.linspace(-187.68, -187.68, 1000)
y = np.linspace(14.133, 13.867, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+205)**2/300 + (y -14)**2/300, [1], color = "k")
x = np.linspace(-187.68, -193.086, 1000)
y = np.linspace(13.867, 1.428, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+205)**2/300 + (y -14)**2/300, [1], color = "k")

#下半部左2蓋
x = np.linspace(-193.086, -188, 1000)
y = np.linspace(1.428, 2.247, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+188)**2/200 + (y +10)**2/150, [1], color = "k")
x = np.linspace(-188, -179.835, 1000)
y = np.linspace(2.247, 0, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+188)**2/200 + (y +10)**2/150, [1], color = "k")
x = np.linspace(-179.835, -173.858, 1000)
y = np.linspace(0, -10.049, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+188)**2/200 + (y +10)**2/150, [1], color = "k")

#下半部左3蓋
x = np.linspace(-173.858, -170, 1000)
y = np.linspace(-10.049, -9.127, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+170)**2/35.5 + (y +13)**2/15, [1], color = "k")
x = np.linspace(-170, -164.042, 1000)
y = np.linspace(-9.127, -12.969, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+170)**2/35.5 + (y +13)**2/15, [1], color = "k")
x = np.linspace(-164.042, -164.042, 1000)
y = np.linspace(-13.031, -12.969, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+170)**2/35.5 + (y +13)**2/15, [1], color = "k")
x = np.linspace(-164.042, -164.242, 1000)
y = np.linspace(-13.031, -14, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+170)**2/35.5 + (y +13)**2/15, [1], color = "k")

#下半部左4蓋
x = np.linspace(-164.243, -167.071, 1000)
y = np.linspace(-14, -17.978, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+160)**2/50 + (y +18)**2/25, [1], color = "k")
x = np.linspace(-167.071, -167.071, 1000)
y = np.linspace(-18.022, -17.978, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+160)**2/50 + (y +18)**2/25, [1], color = "k")
x = np.linspace(-167.071, -160, 1000)
y = np.linspace(-18.022, -23, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+160)**2/50 + (y +18)**2/25, [1], color = "k")

#下半部左5蓋
plt.plot([-160, -155], [-23, -23], "k")

#下半部左6蓋
x = np.linspace(-155, -149.473, 1000)
y = np.linspace(-23, -27.908, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+155)**2/30.558 + (y +28)**2/25, [1], color = "k")

#下半部左7蓋
x = np.linspace(-149.47, -145, 1000)
y = np.linspace(-28.185, -33.972, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+145)**2/20 + (y +28)**2/35.666, [1], color = "k")

#下半部左8蓋
x = np.linspace(-145, -141.036, 1000)
y = np.linspace(-33.972, -29.547, 1000)

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x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+145)**2/15.715 + (y +29.5)**2/20, [1], color = "k")
x = np.linspace(-141.036, -141.036, 1000)
y = np.linspace(-29.453, -29.547, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+145)**2/15.715 + (y +29.5)**2/20, [1], color = "k")

x=np.linspace(-217, -192.94,1000)
y=np.linspace(2.354, -23.088,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+216.95)**2/450+(y+20)**2/500, [1], colors=["k"])
x=np.linspace(-195.94, -179.94,1000)
y=np.linspace(-18, -28.609,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+188.6)**2/75+(y+28.686)**2/100, [1], colors=["k"])
x=np.linspace(-179.94, -165,1000)
y=np.linspace(-20.609, -37.769,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+175)**2/100+(y+37.769)**2/110, [1], colors=["k"])
x=np.linspace(-136.8, -165.3,1000)
y=np.linspace(-48.2, -35,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+161)**2/50+(y+43.6)**2/50, [1], colors=["k"])
x=np.linspace(-155.998, -132,1000)
y=np.linspace(-28.598, -58.738,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+146.14)**2/200+(y+58.738)**2/200, [1], colors=["k"])
x=np.linspace(-131.988, -104,1000)
y=np.linspace(-28.733, -69.411,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+122.97)**2/100+(y+64)**2/150, [1], colors=["k"])
x=np.linspace(-113.988, -80,1000)
y=np.linspace(-28.733, -90.411,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+103.61)**2/150+(y+80)**2/400, [1], colors=["k"])
x=np.linspace(-92.574, -43.1,1000)
y=np.linspace(-74, -89.704,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+68)**2/650+(y+94)**2/400, [1], colors=["k"])
x=np.linspace(-43.3, -42.4,1000)
y=np.linspace(-89.5, -94,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+68)**2/650+(y+94)**2/400, [1], colors=["k"])
x=np.linspace(-38.792, -42.5,1000)
y=np.linspace(-98.728, -94.213,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+37)**2/30.305+(y+94)**2/25, [1], colors=["k"])
x=np.linspace(-31.3, -43.6,1000)
y=np.linspace(-97, -119.927,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+35.763)**2/60+(y+110)**2/150, [1], colors=["k"])
x=np.linspace(-40.2, -58,1000)
y=np.linspace(-120, -129,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+50)**2/95.3525+(y+120)**2/70, [1], colors=["k"])
x=np.linspace(-97.35, -58,1000)
y=np.linspace(-139.953, -116,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+75)**2/500+(y+140.7098)**2/600, [1], colors=["k"])

plt.plot([-97.351, -97.351], [-139.989, -240], "k")

x=np.linspace(-112.7, -97.35,1000)
y=np.linspace(-249, -240,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+105)**2/58.51+(y+240)**2/80, [1], colors=["k"])
x=np.linspace(-112, -112.7,1000)
y=np.linspace(-236.413, -243.606,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+105)**2/58.51+(y+240)**2/80, [1], colors=["k"])
x=np.linspace(-112.007, -106)
y=np.linspace(-236.413, -115.085,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+113.92)**2/50+(y+160)**2/6300, [1], colors=["k"])
x=np.linspace(-108.1, -118.077,1000)
y=np.linspace(-108, -114.795,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+113.08)**2/25+(y+115)**2/40, [1], colors=["k"])
x=np.linspace(-118.077, -130,1000)
y=np.linspace(-114.795, -92,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+125.823)**2/60+(y+115)**2/500, [1], colors=["k"])

x=np.linspace(-228.066, -218.02,1000)
y=np.linspace(-41.263, -50.487,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y, (x+218.02)**2/101+(y+41)**2/90, [1], colors=["k"])

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x=np.linspace(-226.046,-209.995,1000)
y=np.linspace(-46.71,-50.5,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+218.02)**2/101+(y+41)**2/90,[1],colors=["k"])
x=np.linspace(-210.2,-188,1000)
y=np.linspace(-42.1,-64.6,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+205.79)**2/60+(y+65.49)**2/500,[1],colors=["k"])
x=np.linspace(-198.3,-187,1000)
y=np.linspace(-66,-55.5,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+193.049)**2/25+(y+65.49)**2/40,[1],colors=["k"])
x=np.linspace(-188,-169.663,1000)
y=np.linspace(-75,-65,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+178)**2/101+(y+65.49)**2/90,[1],colors=["k"])
x=np.linspace(-169.663,-157.964,1000)
y=np.linspace(-67,-88.866,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+165.7)**2/60+(y+90)**2/500,[1],colors=["k"])
x=np.linspace(-157.964,-148,1000)
y=np.linspace(-83,-91,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+153.045)**2/25+(y+90)**2/40,[1],colors=["k"])

x=np.linspace(-130,-148.9,1000)
y=np.linspace(-99.887,-90,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+138)**2/101+(y+90.4)**2/90,[1],colors=["k"])

#下半部藍曲
x=np.linspace(-221.34,-200.12,1000)
y=np.linspace(-6.639,-32.484,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+221.34)**2/450+(y+29)**2/500,[1],colors=["b"])

x=np.linspace(-184,-200.386,1000)
y=np.linspace(-27.686,-37.609,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+192.99)**2/75+(y+37.686)**2/100,[1],colors=["b"])

x=np.linspace(-184.3,-169.39,1000)
y=np.linspace(-36.281,-46.769,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+179.39)**2/100+(y+46.769)**2/110,[1],colors=["b"])

x=np.linspace(-158,-169.39,1000)
y=np.linspace(-57.58,-45.5,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+165.39)**2/50+(y+52.6)**2/50,[1],colors=["b"])

x=np.linspace(-160.388,-135,1000)
y=np.linspace(-53.5,-68,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+150.53)**2/200+(y+67.738)**2/200,[1],colors=["b"])

x=np.linspace(-136.36,-117.3,1000)
y=np.linspace(-60,-78.051,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+127.36)**2/100+(y+73)**2/150,[1],colors=["b"])

x=np.linspace(-118.23,-95,1000)
y=np.linspace(-70,-95.964,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+108)**2/160+(y+89)**2/350,[1],colors=["b"])

plt.plot([-96.26,-107.07],[-95.964,-109.986],"b")

#下下半部藍曲1
x=np.linspace(-107.08,-117.077,1000)
y=np.linspace(-110,-103,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+112.08)**2/25+(y+110)**2/40,[1],colors=["b"])

#下下半部藍曲2
x=np.linspace(-129,-117.077,1000)
y=np.linspace(-87,-109.795,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+124.823)**2/60+(y+110)**2/500,[1],colors=["b"])

#下下半部藍曲3
x=np.linspace(-129,-145.046,1000)
y=np.linspace(-91.142,-95,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+137)**2/101+(y+85.4)**2/90,[1],colors=["b"])

#下下半部藍曲3

```

```

x=np.linspace(-139,-147.042,1000)
y=np.linspace(-94.697,-85.024,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+137)**2/101+(y+85.4)**2/90,[1],colors=["b"])

#下下半部藍曲4
x=np.linspace(-147,-156.964,1000)
y=np.linspace(-86,-78,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+152.045)**2/25+(y+85)**2/40,[1],colors=["b"])

#下下半部藍曲6
x=np.linspace(-156,-168.663,1000)
y=np.linspace(-83.866,-62,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+164.7)**2/60+(y+85)**2/500,[1],colors=["b"])

#下下半部藍曲7
x=np.linspace(-168.663,-186,1000)
y=np.linspace(-62,-70,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+177)**2/101+(y+60.49)**2/90,[1],colors=["b"])

#下下半部藍曲8
x=np.linspace(-197.045,-187,1000)
y=np.linspace(-60,-54,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+192.049)**2/25+(y+60.49)**2/40,[1],colors=["b"])

#下下半部藍曲9
x=np.linspace(-197.045,-208.995,1000)
y=np.linspace(-60,-38,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+204.79)**2/60+(y+60.49)**2/500,[1],colors=["b"])

#下下半部藍曲10
x=np.linspace(-208.995,-225.046,1000)
y=np.linspace(-41.71,-46,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+217.02)**2/101+(y+36)**2/90,[1],colors=["b"])

#下下半部藍曲11
x=np.linspace(-227.8,-217.02,1000)
y=np.linspace(-36,-45.487,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x+217.02)**2/101+(y+36)**2/90,[1],colors=["b"])
# Right Wing
plt.plot([58,58],[95.076,150.937],"r")
plt.plot([30.624,41.246],[124.128,92.262],"r")
x = np.linspace(58, 30.623, 1000)
y = np.linspace(150.937, 124.126, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x-300)**2 + 100000*(y - 7)**2,[5000000000],color = "r")
x = np.linspace(58, 41.3, 1000)
y = np.linspace(95.076, 92.269, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,25000*(x+70)**2 + 120000*(y - 242)**2,[3000000000],color = "r")
plt.plot([60,60],[93.442,155.6],"orange")
plt.plot([28.465,39.978],[124.605,90.066],"orange")
x = np.linspace(60, 28.465, 1000)
y = np.linspace(155.6, 124.605, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x-300)**2 + 100000*(y - 10)**2,[5000000000],color = "orange")
x = np.linspace(60, 40, 1000)
y = np.linspace(93.442, 90.069, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,25000*(x+70)**2 + 120000*(y - 240)**2,[3000000000],color = "orange")

#左右2方格
plt.plot([106,106],[183.5,105.9],"r")
plt.plot([82,82],[168.9,100],"r")
x = np.linspace(82, 106, 1000)
y = np.linspace(100, 105.814, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,25000*(x+70)**2 + 120000*(y - 242)**2,[3000000000],color = "r")
x = np.linspace(106, 82, 1000)
y = np.linspace(183.584, 168.981, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x-300)**2 + 100000*(y - 7)**2,[5000000000],color = "r")

plt.plot([108,108],[187.674,104.4],"orange")
plt.plot([80,80],[170.6,97.5],"orange")
x = np.linspace(108, 80, 1000)
y = np.linspace(104.356,97.478, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,25000*(x+70)**2 + 120000*(y - 240)**2,[3000000000],color = "orange")
x = np.linspace(108, 80, 1000)

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```

y = np.linspace(187.674, 170.624, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x-300)**2 + 100000*(y - 10)**2, [5000000000], color = "orange")

#左右3方格
plt.plot([141.85,154.505],[116.95,205.534],"r")
plt.plot([127,127],[111.943,194.1],"r")
x = np.linspace(154.505 , 127 , 1000)
y = np.linspace(205.543 , 194.1 , 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x-300)**2 + 100000*(y - 7)**2, [5000000000], color = "r")
x = np.linspace(127 , 141.85 , 1000)
y = np.linspace(111.943 , 116.95 , 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x+70)**2 + 120000*(y - 242)**2, [3000000000], color = "r")

plt.plot([143.7,157.066],[115.9,209.462],"orange")
plt.plot([125,125],[109.6,196.2],"orange")
x = np.linspace(157.066 , 125 , 1000)
y = np.linspace(209.462 , 196.246 , 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x-300)**2 + 100000*(y - 10)**2, [5000000000], color = "orange")
x = np.linspace(143.4 , 125 , 1000)
y = np.linspace(115.45 , 109.31 , 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x+70)**2 + 120000*(y - 240)**2, [3000000000], color = "orange")

#左右4方格
plt.plot([187,187],[215.84,135.982],"r")
plt.plot([160,173],[124,211.769],"r")
x = np.linspace(173,187, 1000)
y = np.linspace(211.769 , 215.84 , 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x-300)**2 + 100000*(y - 7)**2, [5000000000], color = "r")
x = np.linspace( 187, 160.4 , 1000)
y = np.linspace( 136,124 , 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x+70)**2 + 120000*(y - 242)**2, [3000000000], color = "r")

plt.plot([189,189],[219.3,135],"orange")
plt.plot([158,171.3],[121,214],"orange")
x = np.linspace(189,171.3, 1000)
y = np.linspace(219.3,214, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x-300)**2 + 100000*(y - 10)**2, [5000000000], color = "orange")
x = np.linspace(189, 158, 1000)
y = np.linspace(135, 121, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x+70)**2 + 120000*(y - 240)**2, [3000000000], color = "orange")

#左右5方格
plt.plot([229,229],[224.898,162.2],"r")
plt.plot([206,206],[220.5,146.45],"r")
x = np.linspace(229,-206, 1000)
y = np.linspace( 224.898,220.5 , 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x-300)**2 + 100000*(y - 7)**2, [5000000000], color = "r")
x = np.linspace( 229, 206 , 1000)
y = np.linspace( 162.2, 146.45, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x+70)**2 + 120000*(y - 242)**2, [3000000000], color = "r")

plt.plot([231,231],[228.219,161.739],"orange")
plt.plot([204,204],[223,143.3],"orange")
x = np.linspace(231,204, 1000)
y = np.linspace(228.219,223, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x-300)**2 + 100000*(y - 10)**2, [5000000000], color = "orange")
x = np.linspace(231, 204, 1000)
y = np.linspace(161.739,143.3 , 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x+70)**2 + 120000*(y - 240)**2, [3000000000], color = "orange")

#左右6方格
plt.plot([271,271],[229.65,214.165],"r")
plt.plot([247,247],[227.444,178.244],"r")
x = np.linspace(271,247, 1000)
y = np.linspace( 229.65, 227.444, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 50000*(x-300)**2 + 100000*(y - 7)**2, [5000000000], color = "r")
x = np.linspace( 271, 247 , 1000)
y = np.linspace( 214.165, 178.244, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, 25000*(x+70)**2 + 120000*(y - 242)**2, [3000000000], color = "r")

plt.plot([273,273],[232.79,217.9],"orange")
plt.plot([245,245],[230.199,174.212],"orange")

```



```

x = np.linspace(273,245, 1000)
y = np.linspace(232.79,230.199, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x-300)**2 + 100000*(y - 10)**2,[5000000000],color = "orange")
x = np.linspace(273, 245, 1000)
y = np.linspace(217.869, 174.212, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,25000*(x+70)**2 + 120000*(y - 240)**2,[3000000000],color = "orange")

#上1黑
x = np.linspace(300, 375, 1000)
y = np.linspace(246.807,240.427, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x-300)**2 + 100000*(y - 23.2)**2,[5000000000],color = "k")
x = np.linspace(300, 12.602, 1000)
y = np.linspace(246.807, 116.48, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x-300)**2 + 100000*(y - 23.2)**2,[5000000000],color = "k")

#上2藍
x = np.linspace(300, 13.621, 1000)
y = np.linspace(238.607, 109.834, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x-300)**2 + 100000*(y -15)**2,[5000000000],color = "blue")
x = np.linspace(347.638, 300, 1000)
y = np.linspace(236.059, 238.607, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,50000*(x-300)**2 + 100000*(y -15)**2,[5000000000],color = "blue")

#下1黑
x = np.linspace(285.717, 17.4, 1000)
y = np.linspace(220, 75.883, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,25000*(x+60)**2 + 120000*(y -230)**2,[3000000000],color = "k")

#左1黑
x = np.linspace(374.998, 400, 1000)
y = np.linspace(240.427, 228.138, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-360)**2/2892 + (y -200)**2/1772.2,[1],color = "k")
x = np.linspace(400, 413.777, 1000)
y = np.linspace(228.138, 200, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-360)**2/2892 + (y -200)**2/1772.2,[1],color = "k")

#左2黑
x = np.linspace(413.777, 380.053, 1000)
y = np.linspace(200, 153.146, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-360)**2/3000 + (y -212)**2/4000,[1],color = "k")

#左3黑
x = np.linspace(380.05, 369.525, 1000)
y = np.linspace(153.145, 144.443, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-382.65)**2/175 + (y -143.17)**2/103.5,[1],color = "k")

#左4黑
x = np.linspace(369.525, 300, 1000)
y = np.linspace(144.443, 65, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-300)**2/115 + (y -197.25)**2/350,[50],color = "k")

#下黑線
plt.plot([300,120],[65,65],"k")

#下右黑線
plt.plot([120,50],[65,60],"k")

#下右右黑線
plt.plot([18.33,50],[60,60],"k")

#藍1
plt.plot([347.638,320],[236.055,225],"b")

#藍2
plt.plot([350,320],[213,225],"b")

#藍3
plt.plot([350,315],[213,199],"b")

#藍4
plt.plot([345,315],[187,199],"b")

#藍5
plt.plot([345,295],[187,167],"b")

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```

#藍6
plt.plot([320,295],[157,167],"b")

#藍7
plt.plot([320,270],[157,137],"b")

#藍8
plt.plot([305,270],[123,137],"b")

#藍9
plt.plot([305,265],[123,107],"b")

#藍10
plt.plot([300,265],[93,107],"b")

#藍11
plt.plot([300,255],[93,75],"b")

#黑1
plt.plot([320,286],[225,220],"k")

#黑2
plt.plot([315,279.687],[199,199],"k")

#黑3
plt.plot([295,263.389],[167,173.322],"k")

#黑4
plt.plot([270,236.434],[137,148.189],"k")

#黑5
plt.plot([265,197.024],[107,123.994],"k")

#黑6
plt.plot([255,134.129],[74.915,99.047],"k")

#圖圖
x=np.linspace(410,293,1000)
y=np.linspace(73,232,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-385)**2/15+(y-225)**2/15,[1],colors=["k"])
plt.contour(x,y,(x-405)**2/25+(y-205)**2/25,[1],colors=["k"])
plt.contour(x,y,(x-375)**2/70+(y-205)**2/70,[1],colors=["k"])
plt.contour(x,y,(x-355)**2/45+(y-225)**2/45,[1],colors=["k"])
plt.contour(x,y,(x-360)**2/90+(y-185)**2/50,[1],colors=["k"])
plt.contour(x,y,(x-395)**2/35+(y-185)**2/35,[1],colors=["k"])
plt.contour(x,y,(x-370)**2/30+(y-165)**2/30,[1],colors=["k"])
plt.contour(x,y,(x-345)**2/80+(y-165)**2/65,[1],colors=["k"])
plt.contour(x,y,(x-358)**2/30+(y-140)**2/30,[1],colors=["k"])
plt.contour(x,y,(x-335)**2/80+(y-140)**2/50,[1],colors=["k"])
plt.contour(x,y,(x-350)**2/28+(y-120)**2/28,[1],colors=["k"])
plt.contour(x,y,(x-325)**2/70+(y-120)**2/60,[1],colors=["k"])
plt.contour(x,y,(x-338)**2/20+(y-100)**2/20,[1],colors=["k"])
plt.contour(x,y,(x-312)**2/65+(y-100)**2/55,[1],colors=["k"])
plt.contour(x,y,(x-320)**2/15+(y-80)**2/15,[1],colors=["k"])
plt.contour(x,y,(x-300)**2/45+(y-80)**2/45,[1],colors=["k"])
x=np.linspace(108,85,1000)
y=np.linspace(-105,-235,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-97)**2/68+(y+115)**2/45,[1],colors=["b"])
plt.contour(x,y,(x-101)**2+(y+126.5)**2,[18],colors=["b"])
plt.contour(x,y,(x-102)**2+(y+136)**2,[12],colors=["b"])
plt.contour(x,y,(x-102.1)**2+(y+144.5)**2,[9],colors=["b"])
plt.contour(x,y,(x-102.2)**2+(y+152.8)**2,[8],colors=["b"])
plt.contour(x,y,(x-102.2)**2+(y+160.8)**2,[8],colors=["b"])
plt.contour(x,y,(x-102.2)**2+(y+169)**2,[8],colors=["b"])
plt.contour(x,y,(x-102.3)**2+(y+177)**2,[8],colors=["b"])
plt.contour(x,y,(x-102.4)**2+(y+185.2)**2,[8],colors=["b"])
plt.contour(x,y,(x-102.5)**2+(y+193)**2,[9],colors=["b"])
plt.contour(x,y,(x-102.7)**2+(y+200.8)**2,[10],colors=["b"])
plt.contour(x,y,(x-103)**2+(y+209)**2,[12],colors=["b"])
plt.contour(x,y,(x-103.2)**2+(y+218)**2,[15],colors=["b"])
plt.contour(x,y,(x-103.5)**2/18+(y+228)**2/18,[1],colors=["b"])

x=np.linspace(225,43,1000)
y=np.linspace(-25,-130,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-51)**2/35+(y+118)**2/57,[1],colors=["b"])
plt.contour(x,y,(x-68)**2/400+(y+94)**2/230,[1],colors=["r"])
plt.contour(x,y,(x-68)**2/500+(y+94)**2/300,[1],colors=["orange"])
x=np.linspace(225,43,1000)
y=np.linspace(-77,-85,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-137)**2/55+(y+85)**2/55,[1],colors=["orange"])
x=np.linspace(225,43,1000)
y=np.linspace(-79,-83,1000)
x,y=np.meshgrid(x,y)

```

```

plt.contour(x,y,(x-137)**2/30+(y+85)**2/30,[1],colors=["r"])
x=np.linspace(225,43,1000)
y=np.linspace(-52,-60,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-177)**2/55+(y+60)**2/55,[1],colors=["orange"])
x=np.linspace(225,43,1000)
y=np.linspace(-54,-58,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-177)**2/30+(y+60)**2/30,[1],colors=["r"])
x=np.linspace(225,43,1000)
y=np.linspace(-27,-35,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-217)**2/55+(y+35)**2/55,[1],colors=["orange"])
x=np.linspace(225,43,1000)
y=np.linspace(-29,-33,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-217)**2/30+(y+35)**2/30,[1],colors=["r"])
x=np.linspace(98.4,112,1000)
y=np.linspace(-240,-248,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-105)**2/43+(y+239)**2/80,[1],colors=["b"])
plt.plot([98.484,98.484],[-234.294,-240],color="b")

x=np.linspace(110,111.507,1000)
y=np.linspace(-234.294,-240.108,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-104.95)**2/43+(y+240)**2/80,[1],colors=["b"])

plt.plot([109.98,98.484],[-234.294,-234.294],color="b")

plt.plot([142.08,131.92],[-83,-83],color="r")
plt.plot([144.417,129.584],[-85,-85],color="orange")
plt.plot([182.073,171.94],[-58,-58],color="r")
plt.plot([184.4,169.61],[-60,-60],color="orange")
plt.plot([222.07,211.91],[-33,-33],color="r")
plt.plot([224.41,209.59],[-35,-35],color="orange")

#下藍1
x = np.linspace(254.787, 180, 1000)
y = np.linspace(74.915, 79.142, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-180)**2/11000 + (y -65)**2/200,[1],color = "blue")

#下藍2
plt.plot([180,143.4],[79.07,79.07],"b")

#下藍3
x = np.linspace(143.4, 81.243, 1000)
y = np.linspace(79.07, 72.116, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-144.48)**2/4000 + (y -72)**2/50,[1],color = "blue")

#下藍4
x = np.linspace(18.212, 81.243, 1000)
y = np.linspace(62, 72.116, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-18)**2/4000 + (y -72)**2/100,[1],color = "blue")

#下半左1黑
x = np.linspace(132.314, 218.758, 1000)
y = np.linspace(65, 0, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-100)**2/16401 + (y +41)**2/12000,[1],color = "k")
x = np.linspace(218.758, 228.066, 1000)
y = np.linspace(0, -41.263, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-100)**2/16401 + (y +41)**2/12000,[1],color = "k")

#下半左2黑
x = np.linspace(26.245, 193.086, 1000)
y = np.linspace(60, 1.428, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+30)**2/56215 + (y +30)**2/8583,[1],color = "k")

#下半左3黑
x = np.linspace(24.966, 140.766, 1000)
y = np.linspace(60, -28.576, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x+50)**2/37605 + (y +50)**2/14226,[1],color = "k")

#下半左4黑
x = np.linspace(20.781, 79.5, 1000)
y = np.linspace(60, -49.401, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y,(x-19.823)**2/3600 + (y +62.05)**2/14900,[1],color = "k")

#下半左5黑

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```

x = np.linspace(19.812, 31.597, 1000)
y = np.linspace(60, -68.008, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+0)**2/1000 + (y +75)**2/30000, [1], color = "k")
x = np.linspace(31.597, 31.62, 1000)
y = np.linspace(-68.008, -77.295, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+0)**2/1000 + (y +75)**2/30000, [1], color = "k")
x = np.linspace(31.597, 31.62, 1000)
y = np.linspace(-68.008, -72.705, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+0)**2/1000 + (y +75)**2/30000, [1], color = "k")
x = np.linspace(31.62, 31.65, 1000)
y = np.linspace(-72.705, -77.295, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+0)**2/1000 + (y +75)**2/30000, [1], color = "k")
x = np.linspace(31.62, 31.61, 1000)
y = np.linspace(-72.705, -79.923, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+0)**2/1000 + (y +75)**2/30000, [1], color = "k")
x = np.linspace(31.61, 31.292, 1000)
y = np.linspace(-79.923, -99.999, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x+0)**2/1000 + (y +75)**2/30000, [1], color = "k")

#下半左6黑
x = np.linspace(79.5, 84.95, 1000)
y = np.linspace(-50, -73.876, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-88)**2/71.75 + (y +50)**2/655, [1], color = "k")

#下半部右蓋
x = np.linspace(31.6, 40, 1000)
y = np.linspace(-78.556, -70.093, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-60)**2/900 + (y +85)**2/400, [1], color = "k")
x = np.linspace(40, 60, 1000)
y = np.linspace(-70.093, -65, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-60)**2/900 + (y +85)**2/400, [1], color = "k")
x = np.linspace(60, 80, 1000)
y = np.linspace(-65, -70.093, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-60)**2/900 + (y +85)**2/400, [1], color = "k")
x = np.linspace(80, 85, 1000)
y = np.linspace(-70.093, -73.945, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-60)**2/900 + (y +85)**2/400, [1], color = "k")

#下半部右2蓋
x = np.linspace(84.976, 81.54, 1000)
y = np.linspace(-73.92, -60.296, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-97.35)**2/250 + (y +60)**2/500, [1], color = "k")
x = np.linspace(81.54, 81.54, 1000)
y = np.linspace(-59.704, -60.296, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-97.35)**2/250 + (y +60)**2/500, [1], color = "k")
x = np.linspace(81.54, 97.35, 1000)
y = np.linspace(-59.704, -37.639, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-97.35)**2/250 + (y +60)**2/500, [1], color = "k")
x = np.linspace(81.54, 97.35, 1000)
y = np.linspace(-59.704, -37.639, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-97.35)**2/250 + (y +60)**2/500, [1], color = "k")
x = np.linspace(104.4, 97.35, 1000)
y = np.linspace(-39.985, -37.639, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-97.35)**2/250 + (y +60)**2/500, [1], color = "k")

#下半部右3蓋
x = np.linspace(104.44, 116.75, 1000)
y = np.linspace(-40.012, -42.472, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-116.75)**2/190 + (y +38)**2/20, [1], color = "k")

#下半部右4蓋
x = np.linspace(116.75, 128.956, 1000)
y = np.linspace(-42.472, -29.493, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-116.75)**2/150 + (y +28.33)**2/200, [1], color = "k")

#下半部右5蓋
x = np.linspace(128.97, 135, 1000)
y = np.linspace(-29.412, -25.528, 1000)
x, y = np.meshgrid(x, y)

```

```

plt.contour(x, y, (x-135)**2/37 + (y +30)**2/20, [1], color = "k")
x = np.linspace(140.766, 135, 1000)
y = np.linspace(-28.576, -25.528, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-135)**2/37 + (y +30)**2/20, [1], color = "k")

#下半部左蓋
x = np.linspace(197.78, 187.68, 1000)
y = np.linspace(29.744, 14.133, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-205)**2/300 + (y -14)**2/300, [1], color = "k")
x = np.linspace(187.68, 187.68, 1000)
y = np.linspace(14.133, 13.867, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-205)**2/300 + (y -14)**2/300, [1], color = "k")
x = np.linspace(187.68, 193.086, 1000)
y = np.linspace(13.867, 1.428, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-205)**2/300 + (y -14)**2/300, [1], color = "k")

#下半部左2蓋
x = np.linspace(193.086, 188, 1000)
y = np.linspace(1.428, 2.247, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-188)**2/200 + (y +10)**2/150, [1], color = "k")
x = np.linspace(188, 179.835, 1000)
y = np.linspace(2.247, 0, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-188)**2/200 + (y +10)**2/150, [1], color = "k")
x = np.linspace(179.835, 173.858, 1000)
y = np.linspace(0, -10.049, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-188)**2/200 + (y +10)**2/150, [1], color = "k")

#下半部左3蓋
x = np.linspace(173.858, 170, 1000)
y = np.linspace(-10.049, -9.127, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-170)**2/35.5 + (y +13)**2/15, [1], color = "k")
x = np.linspace(170, 164.042, 1000)
y = np.linspace(-9.127, -12.969, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-170)**2/35.5 + (y +13)**2/15, [1], color = "k")
x = np.linspace(164.042, 164.042, 1000)
y = np.linspace(-13.031, -12.969, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-170)**2/35.5 + (y +13)**2/15, [1], color = "k")
x = np.linspace(164.042, 164.242, 1000)
y = np.linspace(-13.031, -14, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-170)**2/35.5 + (y +13)**2/15, [1], color = "k")

#下半部左4蓋
x = np.linspace(164.243, 167.071, 1000)
y = np.linspace(-14, -17.978, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-160)**2/50 + (y +18)**2/25, [1], color = "k")
x = np.linspace(167.071, 167.071, 1000)
y = np.linspace(-18.022, -17.978, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-160)**2/50 + (y +18)**2/25, [1], color = "k")
x = np.linspace(167.071, 160, 1000)
y = np.linspace(-18.022, -23, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-160)**2/50 + (y +18)**2/25, [1], color = "k")

#下半部左6蓋
x = np.linspace(155, 149.473, 1000)
y = np.linspace(-23, -27.908, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-155)**2/30.558 + (y +28)**2/25, [1], color = "k")

#下半部左7蓋
x = np.linspace(149.47, 145, 1000)
y = np.linspace(-28.185, -33.972, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-145)**2/20 + (y +28)**2/35.666, [1], color = "k")

#下半部左8蓋
x = np.linspace(145, 141.036, 1000)
y = np.linspace(-33.972, -29.547, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-145)**2/15.715 + (y +29.5)**2/20, [1], color = "k")
x = np.linspace(141.036, 141.036, 1000)
y = np.linspace(-29.453, -29.547, 1000)
x, y = np.meshgrid(x, y)
plt.contour(x, y, (x-145)**2/15.715 + (y +29.5)**2/20, [1], color = "k")

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```

x=np.linspace(217,192.94,1000)
y=np.linspace(2.354,-23.088,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-216.95)**2/450+(y+20)**2/500,[1],colors=["k"])
x=np.linspace(195.94,179.94,1000)
y=np.linspace(-18,-28.609,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-188.6)**2/75+(y+28.686)**2/100,[1],colors=["k"])
x=np.linspace(179.94,165,1000)
y=np.linspace(-20.609,-37.769,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-175)**2/100+(y+37.769)**2/110,[1],colors=["k"])
x=np.linspace(136.8,165.3,1000)
y=np.linspace(-48.2,-35,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-161)**2/50+(y+43.6)**2/50,[1],colors=["k"])
x=np.linspace(155.998,132,1000)
y=np.linspace(-28.598,-58.738,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-146.14)**2/200+(y+58.738)**2/200,[1],colors=["k"])
x=np.linspace(131.988,104,1000)
y=np.linspace(-28.733,-69.411,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-122.97)**2/100+(y+64)**2/150,[1],colors=["k"])
x=np.linspace(113.988,80,1000)
y=np.linspace(-28.733,-90.411,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-103.61)**2/150+(y+80)**2/400,[1],colors=["k"])
x=np.linspace(92.574,43.1,1000)
y=np.linspace(-74,-89.704,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-68)**2/650+(y+94)**2/400,[1],colors=["k"])
x=np.linspace(43.3,42.4,1000)
y=np.linspace(-89.5,-94,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-68)**2/650+(y+94)**2/400,[1],colors=["k"])
x=np.linspace(38.792,42.5,1000)
y=np.linspace(-98.728,-94.213,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-37)**2/30.305+(y+94)**2/25,[1],colors=["k"])
x=np.linspace(31.3,43.6,1000)
y=np.linspace(-97,-119.927,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-35.763)**2/60+(y+110)**2/150,[1],colors=["k"])
x=np.linspace(40.2,58,1000)
y=np.linspace(-120,-129,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-50)**2/95.3525+(y+120)**2/70,[1],colors=["k"])
x=np.linspace(97.35,58,1000)
y=np.linspace(-139.953,-116,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-75)**2/500+(y+140.7098)**2/600,[1],colors=["k"])

plt.plot([97.351,97.351],[-139.989,-240],"k")

x=np.linspace(112.7,97.35,1000)
y=np.linspace(-249,-240,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-105)**2/58.51+(y+240)**2/80,[1],colors=["k"])
x=np.linspace(112,112.7,1000)
y=np.linspace(-236.413,-243.606,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-105)**2/58.51+(y+240)**2/80,[1],colors=["k"])
x=np.linspace(112.007,106,1000)
y=np.linspace(-236.413,-115.085,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-113.92)**2/50+(y+160)**2/6300,[1],colors=["k"])
x=np.linspace(108.1,118.077,1000)
y=np.linspace(-108,-114.795,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-113.08)**2/25+(y+115)**2/40,[1],colors=["k"])
x=np.linspace(118.077,130,1000)
y=np.linspace(-114.795,-92,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-125.823)**2/60+(y+115)**2/500,[1],colors=["k"])

x=np.linspace(228.066,218.02,1000)
y=np.linspace(-41.263,-50.487,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-218.02)**2/101+(y+41)**2/90,[1],colors=["k"])
x=np.linspace(226.046,209.995,1000)
y=np.linspace(-46.71,-50.5,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-218.02)**2/101+(y+41)**2/90,[1],colors=["k"])
x=np.linspace(210.2,188,1000)
y=np.linspace(-42.1,-64.6,1000)

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x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-205.79)**2/60+(y+65.49)**2/500,[1],colors=["k"])
x=np.linspace(198.3,187,1000)
y=np.linspace(-66,-55.5,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-193.049)**2/25+(y+65.49)**2/40,[1],colors=["k"])
x=np.linspace(188,169.663,1000)
y=np.linspace(-75,-65,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-178)**2/101+(y+65.49)**2/90,[1],colors=["k"])
x=np.linspace(169.663,157.964,1000)
y=np.linspace(-67,-88.866,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-165.7)**2/60+(y+90)**2/500,[1],colors=["k"])
x=np.linspace(157.964,148,1000)
y=np.linspace(-83,-91,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-153.045)**2/25+(y+90)**2/40,[1],colors=["k"])

x=np.linspace(130,148.9,1000)
y=np.linspace(-99.887,-90,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-138)**2/101+(y+90.4)**2/90,[1],colors=["k"])

#下半部藍曲
x=np.linspace(221.34,200.12,1000)
y=np.linspace(-6.639,-32.484,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-221.34)**2/450+(y+29)**2/500,[1],colors=["b"])

x=np.linspace(184,200.386,1000)
y=np.linspace(-27.686,-37.609,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-192.99)**2/75+(y+37.686)**2/100,[1],colors=["b"])

x=np.linspace(184.3,169.39,1000)
y=np.linspace(-36.281,-46.769,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-179.39)**2/100+(y+46.769)**2/110,[1],colors=["b"])

x=np.linspace(158,169.39,1000)
y=np.linspace(-57.58,-45.5,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-165.39)**2/50+(y+52.6)**2/50,[1],colors=["b"])

x=np.linspace(160.388,135,1000)
y=np.linspace(-53.5,-68,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-150.53)**2/200+(y+67.738)**2/200,[1],colors=["b"])

x=np.linspace(136.36,117.3,1000)
y=np.linspace(-60,-78.051,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-127.36)**2/100+(y+73)**2/150,[1],colors=["b"])

x=np.linspace(118.23,95,1000)
y=np.linspace(-70,-95.964,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-108)**2/160+(y+89)**2/350,[1],colors=["b"])

plt.plot([96.26,107.07],[-95.964,-109.986],"b")

#下下半部藍曲1
x=np.linspace(107.08,117.077,1000)
y=np.linspace(-110,-103,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-112.08)**2/25+(y+110)**2/40,[1],colors=["b"])

#下下半部藍曲2
x=np.linspace(129,117.077,1000)
y=np.linspace(-87,-109.795,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-124.823)**2/60+(y+110)**2/500,[1],colors=["b"])

#下下半部藍曲3
x=np.linspace(129,145.046,1000)
y=np.linspace(-91.142,-95,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-137)**2/101+(y+85.4)**2/90,[1],colors=["b"])

#下下半部藍曲3
x=np.linspace(139,147.042,1000)
y=np.linspace(-94.697,-85.024,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-137)**2/101+(y+85.4)**2/90,[1],colors=["b"])

#下下半部藍曲4

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x=np.linspace(147,156.964,1000)
y=np.linspace(-86,-78,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-152.045)**2/25+(y+85)**2/40,[1],colors=["b"])

#下下半部藍曲6
x=np.linspace(156,168.663,1000)
y=np.linspace(-83.866,-62,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-164.7)**2/60+(y+85)**2/500,[1],colors=["b"])

#下下半部藍曲7
x=np.linspace(168.663,186,1000)
y=np.linspace(-62,-70,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-177)**2/101+(y+60.49)**2/90,[1],colors=["b"])

#下下半部藍曲8
x=np.linspace(197.045,187,1000)
y=np.linspace(-60,-54,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-192.049)**2/25+(y+60.49)**2/40,[1],colors=["b"])

#下下半部藍曲9
x=np.linspace(197.045,208.995,1000)
y=np.linspace(-60,-38,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-204.79)**2/60+(y+60.49)**2/500,[1],colors=["b"])

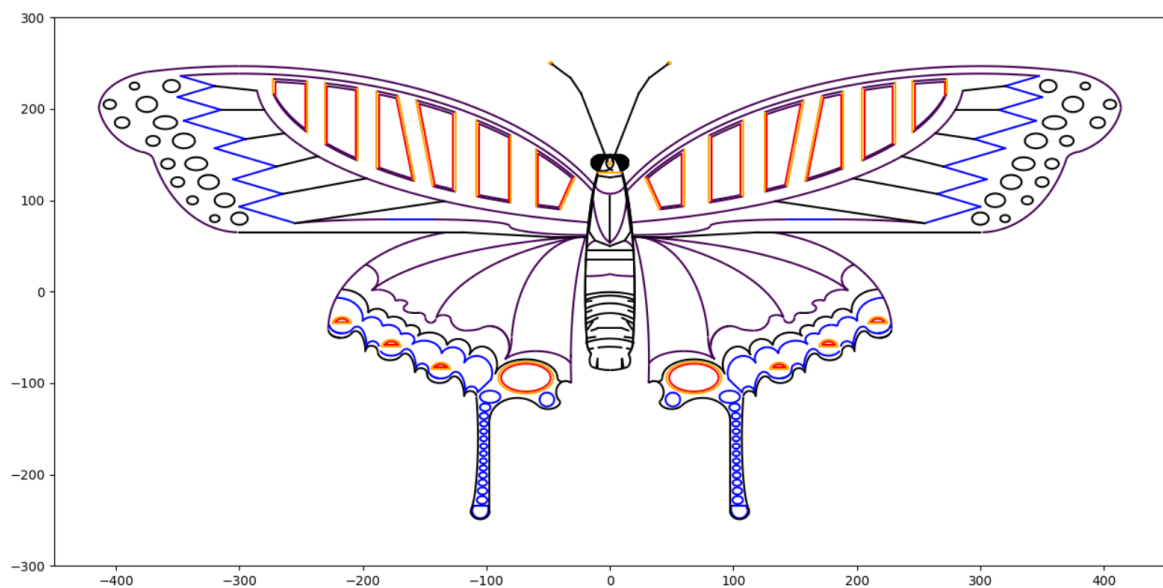
#下下半部藍曲10
x=np.linspace(208.995,225.046,1000)
y=np.linspace(-41.71,-46,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-217.02)**2/101+(y+36)**2/90,[1],colors=["b"])

#下下半部藍曲11
x=np.linspace(227.8,217.02,1000)
y=np.linspace(-36,-45.487,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,(x-217.02)**2/101+(y+36)**2/90,[1],colors=["b"])

plt.plot([155,160],[-23,-23],color="k")
# # Others
x=np.linspace(-20,20,1000)
y=np.linspace(-54.944,150,1000)
x,y=np.meshgrid(x,y)
plt.contour(x,y,x**2/20**2+y**2/150**2,[1],colors=["k"])
# 輸出
plt.xlim(-450,450)
plt.ylim(-300,300)
plt.show()

```

輸出的圖



參考資料

如何在 Matplotlib 中繪製圓

使用 `matplotlib.patches.Circle()` 方法在 Matplotlib 中繪製圓 用圓方程在 Matplotlib 中繪製圓 點的散點圖 要在

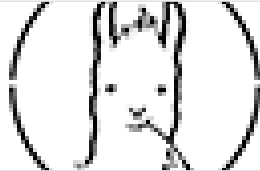
 <https://www.delftstack.com/zh-tw/howto/matplotlib/how-to-plot-a-circle-in-matplotlib/>



Python利用參數方程畫圓


1. 圓的參數方程表示形式 Python代碼：
`import numpy as np`
`import matplotlib.pyplot as plt`
1. 圓半徑 $r =$

 <https://www.twblogs.net/a/5c76b898bd9eee31cea5480f>



用python画多个圆_Python用图例在网络上绘制多个圆_weixin_399084

我想在一个N乘M的网格上画出不同颜色和相同大小的圆。在x, y位置, 可以是在 我希望每个专栏都有一个x标签(这将是一个星期), 和一个ylabel(这将是一个主

了一种使用子图绘制圆的方法, 但是我无法获得文本和网格。在 下面是我画圆图  [https://blog.csdn.net/weixin_39908462/article/details/110546769?utm_term:E7%94%BB%E5%A4%9A%E4%B8%AA%E5%9C%86&utm_medium=distributresult.none-task-blog-2~all~sobaiduweb~default-0-110546769&spm=3001.443](https://blog.csdn.net/weixin_39908462/article/details/110546769?utm_term=E7%94%BB%E5%A4%9A%E4%B8%AA%E5%9C%86&utm_medium=distributresult.none-task-blog-2~all~sobaiduweb~default-0-110546769&spm=3001.443)

Python實現的圓形繪製(畫圓)示例

本文例項講述了Python實現的圓形繪製。分享給大家供大家參考, 具體如下: # -*- coding:utf-8 -*-
#!/python3
import numpy as np
import matplotlib.pyplot as plt

<https://codertw.com/%E7%A8%8B%E5%BC%8F%E8%AA%9E%E8%A8%80/360149/>