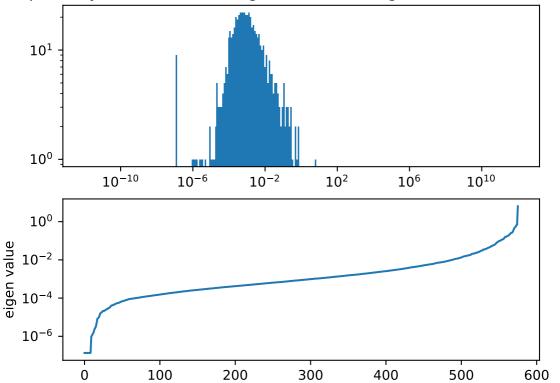
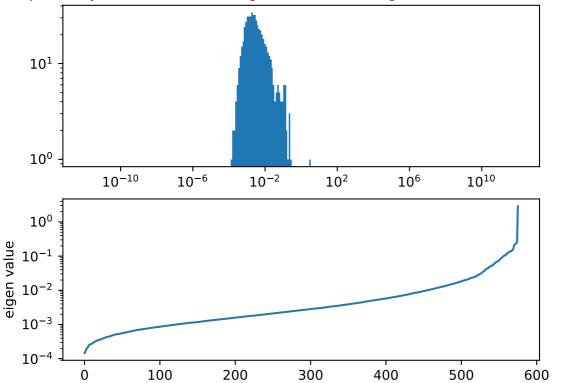
ep: 84 conv1 maxeig: 5.8e+01 mineig: 3.7e-03 con: 1.5e+04  $3 \times 10^{0}$  $2 \times 10^{0}$ 10<sup>0</sup> 1010 10-10 10-6 10-2 10<sup>2</sup> 10<sup>6</sup> 10<sup>1</sup> eigen value 10<sup>-1</sup>  $10^{-2}$ 10 15 25 20

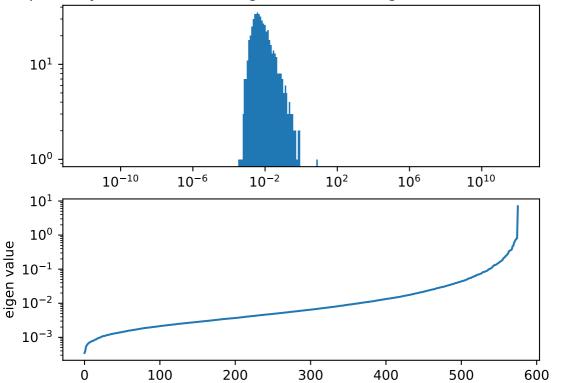
ep: 84 layer1.0.conv1 maxeig: 6.4e+00 mineig: 1.3e-07 con: 4.7e+07



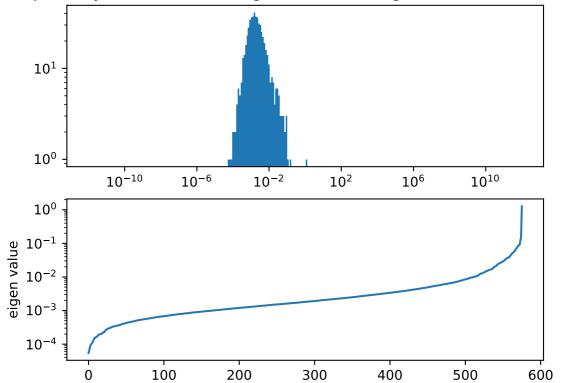
ep: 84 layer1.0.conv2 maxeig: 2.9e+00 mineig: 1.5e-04 con: 2.0e+04



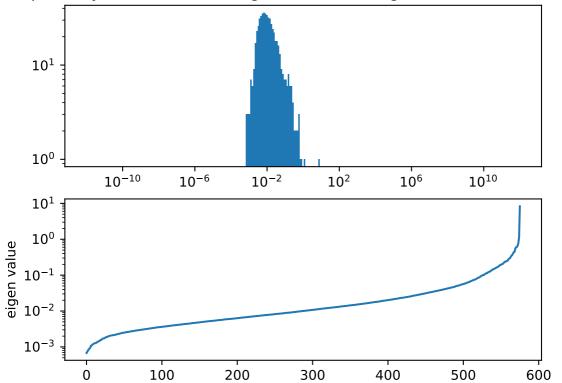
ep: 84 layer1.1.conv1 maxeig: 7.0e+00 mineig: 3.5e-04 con: 2.0e+04



ep: 84 layer1.1.conv2 maxeig: 1.3e+00 mineig: 5.5e-05 con: 2.3e+04

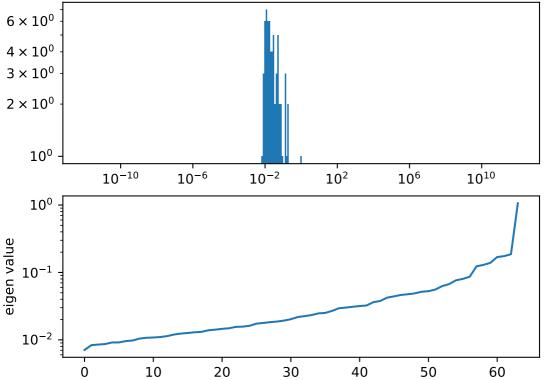


ep: 84 layer2.0.conv1 maxeig: 8.3e+00 mineig: 6.8e-04 con: 1.2e+04



ep: 84 layer2.0.conv2 maxeig: 2.7e+00 mineig: 5.4e-04 con: 5.0e+03  $10^{2}$  $10^{1}$ 10<sup>0</sup> 1010 10-10  $10^{-2}$ 10<sup>6</sup>  $10^{-6}$ 10<sup>2</sup> 10<sup>0</sup> e de ne de n  $10^{-1}$ 10<sup>-3</sup> 200 400 600 800 1000 1200

ep: 84 layer2.0.shortcut.0 maxeig: 1.1e+00 mineig: 7.1e-03 con: 1.5e+02



ep: 84 layer2.1.conv1 maxeig: 7.0e+00 mineig: 6.2e-05 con: 1.1e+05  $10^{2}$ 10<sup>1</sup>  $10^{0}$ 1010 10-10 10-2 10<sup>6</sup>  $10^{-6}$ 10<sup>2</sup>  $10^{1}$ eigen value 10<sup>-3</sup> 200 400 600 800 1000 1200

ep: 84 layer2.1.conv2 maxeig: 4.0e-01 mineig: 9.7e-05 con: 4.2e+03  $10^{2}$  $10^{1}$ 10<sup>0</sup> 1010 10<sup>-10</sup> 10<sup>6</sup>  $10^{-6}$  $10^{-2}$ 10<sup>2</sup>  $10^{-1}$ eigen value 10<sup>-2</sup> 10<sup>-3</sup>  $10^{-4}$ 200 400 600 800 1000 1200

ep: 84 layer3.0.conv1 maxeig: 7.2e+00 mineig: 9.8e-04 con: 7.4e+03  $10^{2}$  $10^{1}$  $10^{0}$ 1010 10-10 10<sup>6</sup>  $10^{-6}$  $10^{-2}$ 10<sup>2</sup>  $10^{1}$ 10° eigen value 10<sup>-1</sup> 10<sup>-2</sup> 10<sup>-3</sup>

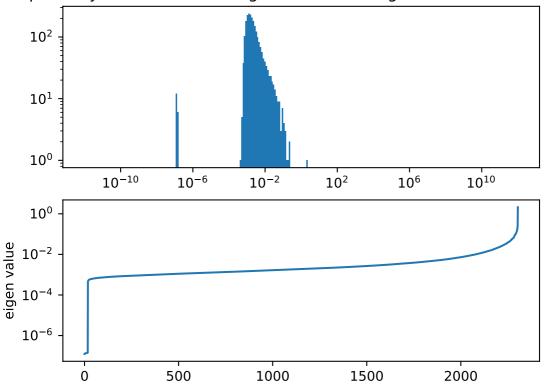
800

1000

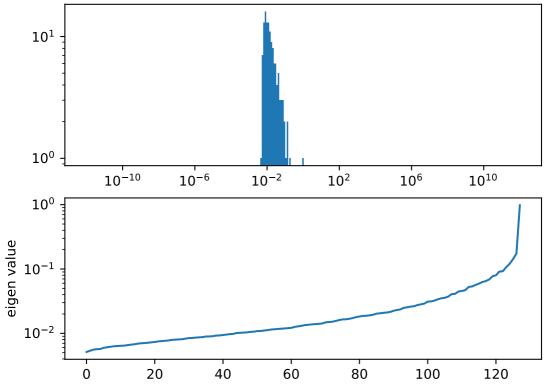
1200

200

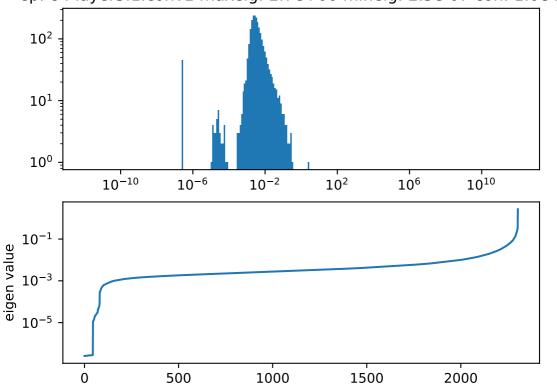
ep: 84 layer3.0.conv2 maxeig: 2.1e+00 mineig: 1.2e-07 con: 1.7e+07



ep: 84 layer3.0.shortcut.0 maxeig: 9.8e-01 mineig: 5.1e-03 con: 1.9e+02



ep: 84 layer3.1.conv1 maxeig: 2.7e+00 mineig: 2.5e-07 con: 1.0e+07

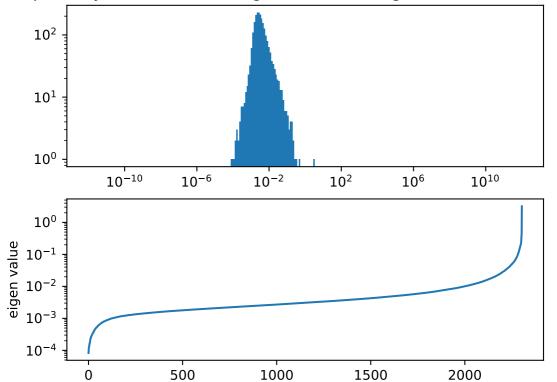


ep: 84 layer3.1.conv2 maxeig: 4.5e-01 mineig: 6.0e-08 con: 7.4e+06 10<sup>2</sup> 10<sup>1</sup> 10<sup>0</sup> 1010 10-10  $10^{-6}$ 10<sup>2</sup> 10<sup>6</sup>  $10^{-2}$ eigen value  $10^{-6}$ 

1500

2000

ep: 84 layer4.0.conv1 maxeig: 3.2e+00 mineig: 8.3e-05 con: 3.8e+04

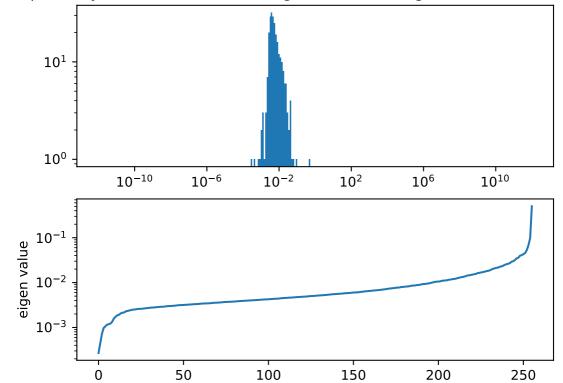


ep: 84 layer4.0.conv2 maxeig: 8.7e-01 mineig: 2.7e-05 con: 3.3e+04  $10^{2}$  $10^{1}$ 10<sup>0</sup> 1010 10-10 10<sup>6</sup>  $10^{-6}$  $10^{-2}$ 10<sup>2</sup> 10<sup>0</sup>  $10^{-1}$ eigen value 10-2 10<sup>-3</sup>  $10^{-4}$ 

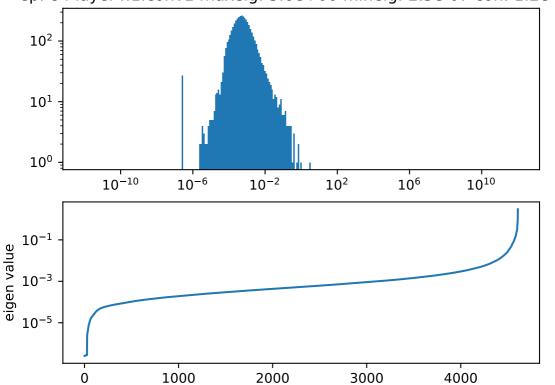
3000

4000

ep: 84 layer4.0.shortcut.0 maxeig: 5.0e-01 mineig: 2.7e-04 con: 1.9e+03



ep: 84 layer4.1.conv1 maxeig: 3.0e+00 mineig: 2.5e-07 con: 1.2e+07



ep: 84 layer4.1.conv2 maxeig: 3.5e+00 mineig: -5.6e-08 con: 5.8e+10  $10^{3}$  $10^{2}$ 10<sup>1</sup> 10<sup>0</sup> 10-10 1010  $10^{-6}$  $10^{-2}$ 10<sup>2</sup> 10<sup>6</sup>  $10^{1}$  $10^{-2}$ eigen value  $10^{-5}$ 

3000

4000

10-8

