

ep: 72 layer1.0.conv1 maxeig: 3.6e-03 mineig: 9.5e-06 con: 3.8e+02  $6 \times 10^{0}$  $4 \times 10^{0}$  $3 \times 10^{0}$  $2 \times 10^{0}$ 10<sup>0</sup> 1010  $10^{-10}$  $10^{-2}$ 10<sup>2</sup> 10<sup>6</sup>  $10^{-6}$ eigen value 1  $10^{-5}$ 50 60 10 20 30 40

ep: 72 layer1.0.conv2 maxeig: 5.2e-04 mineig: 9.4e-06 con: 5.5e+01  $6 \times 10^{0}$  $4 \times 10^{0}$  $3 \times 10^{0}$  $2 \times 10^{0}$ 10<sup>0</sup> 10 10 10-10  $10^{-6}$ 10-2 10<sup>2</sup> 10<sup>6</sup> eigen value  $10^{-4}$ 10<sup>-5</sup> 50 60 10 20 30 40

ep: 72 layer1.1.conv1 maxeig: 1.3e-04 mineig: 3.1e-06 con: 4.1e+01  $6 \times 10^{0}$  $4 \times 10^{0}$  $3 \times 10^{0}$  $2 \times 10^{0}$ 10<sup>0</sup> 10 10 10-10  $10^{-6}$ 10-2 10<sup>2</sup> 10<sup>6</sup>  $10^{-4}$ eigen value 10<sup>-5</sup> 50 60

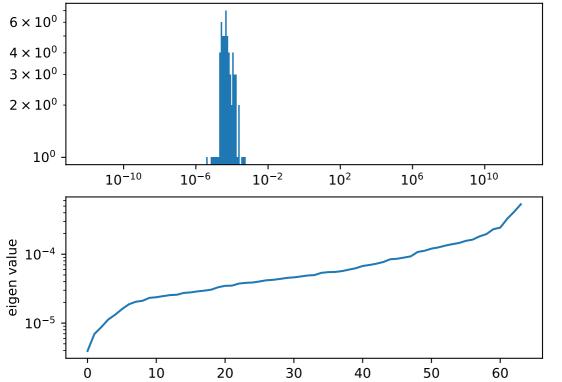
30

40

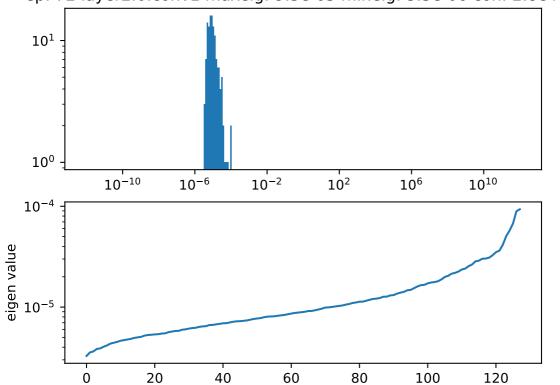
10

20

ep: 72 layer1.1.conv2 maxeig: 5.3e-04 mineig: 3.9e-06 con: 1.3e+02



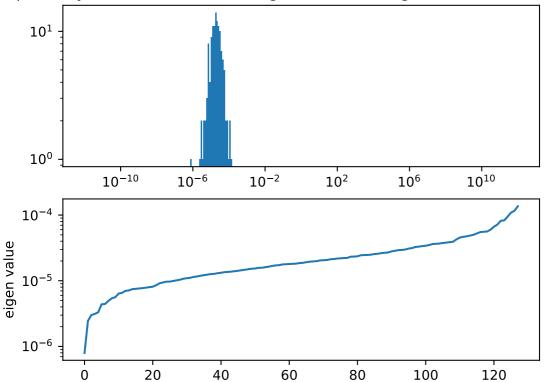
ep: 72 layer2.0.conv1 maxeig: 9.3e-05 mineig: 3.3e-06 con: 2.8e+01



ep: 72 layer2.0.conv2 maxeig: 1.4e-04 mineig: 1.2e-06 con: 1.2e+02  $10^{1}$ 10<sup>0</sup> 10<sup>10</sup> 10<sup>2</sup> 10-10 10-2 10<sup>6</sup>  $10^{-6}$  $10^{-4}$ 10<sup>-5</sup>  $10^{-6}$ 60 100 120 20 40 80

eigen value

ep: 72 layer2.0.shortcut.0 maxeig: 1.4e-04 mineig: 8.0e-07 con: 1.7e+02



ep: 72 layer2.1.conv1 maxeig: 3.0e-05 mineig: 1.6e-06 con: 1.9e+01  $10^{1}$ 10<sup>0</sup> 10<sup>10</sup> 10-10 10<sup>2</sup>  $10^{-6}$ 10-2 10<sup>6</sup> eigen value 10<sup>-5</sup>

60

100

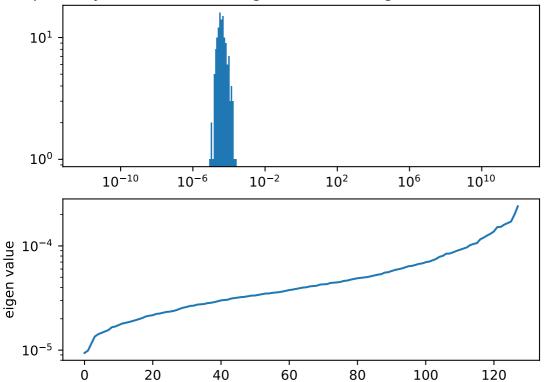
80

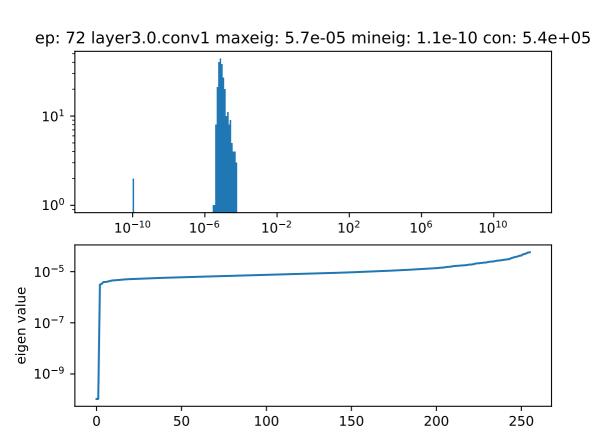
120

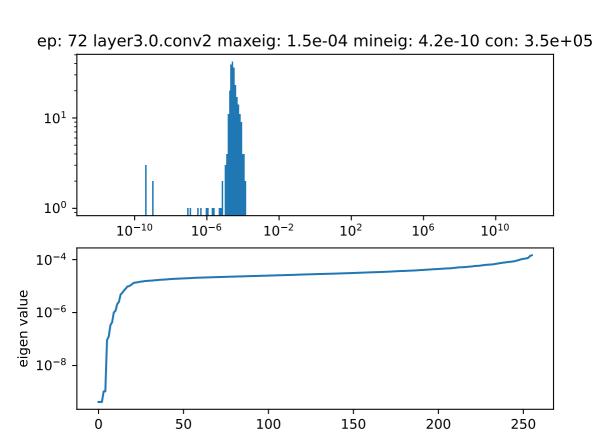
20

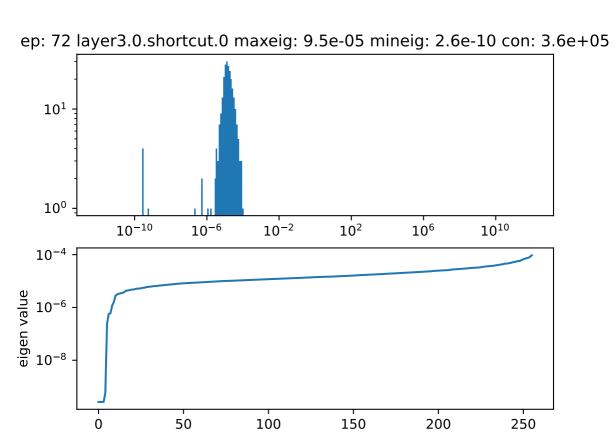
40

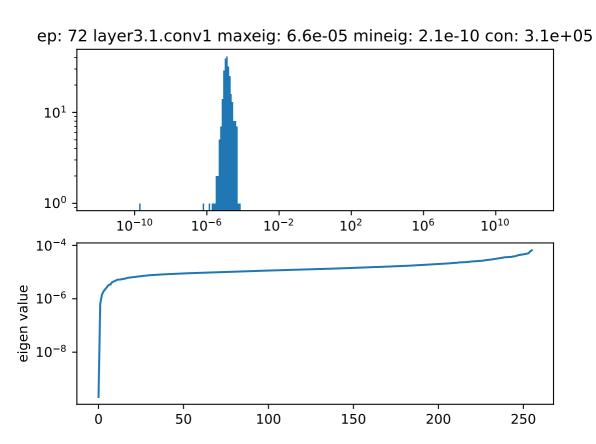
ep: 72 layer2.1.conv2 maxeig: 2.4e-04 mineig: 9.4e-06 con: 2.6e+01









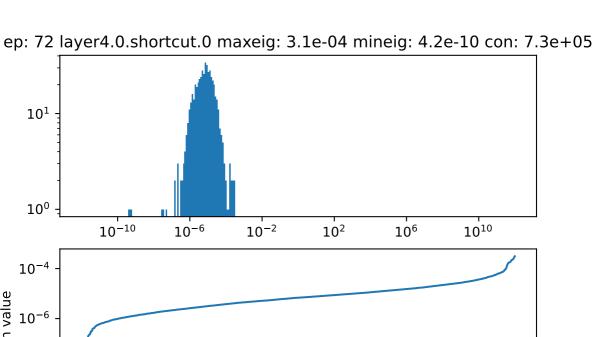


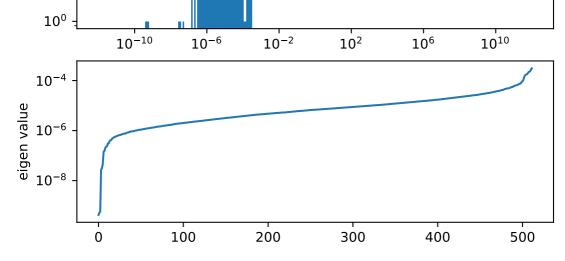
ep: 72 layer3.1.conv2 maxeig: 3.3e-04 mineig: 3.9e-06 con: 8.4e+01  $10^{1}$ 10<sup>0</sup> 10<sup>10</sup> 10-10 10<sup>2</sup> 10-2 10<sup>6</sup>  $10^{-6}$  $10^{-4}$ eigen value 10<sup>-5</sup> 250 50 100 150 200

ep: 72 layer4.0.conv1 maxeig: 1.5e-04 mineig: 9.1e-07 con: 1.7e+02  $10^{1}$ 10<sup>0</sup> 10<sup>10</sup> 10-10 10<sup>2</sup> 10-2 10<sup>6</sup>  $10^{-6}$  $10^{-4}$ eigen value  $10^{-5}$  $10^{-6}$ 100 500 200 300 400

ep: 72 layer4.0.conv2 maxeig: 3.9e-04 mineig: 1.1e-09 con: 3.7e+05  $10^{1}$ 10<sup>0</sup> 10<sup>10</sup> 10-10 10<sup>2</sup>  $10^{-6}$ 10-2 10<sup>6</sup>  $10^{-4}$  $10^{-6}$  $10^{-8}$ 100 500 200 300 400

eigen value





ep: 72 layer4.1.conv1 maxeig: 1.9e-04 mineig: 3.2e-11 con: 6.1e+06  $10^{2}$  $10^{1}$ 10<sup>0</sup> 10<sup>10</sup> 10<sup>2</sup> 10<sup>6</sup> 10-10  $10^{-6}$ 10-2  $10^{-5}$ eigen value  $10^{-7}$  $10^{-9}$ 100 400 500 200 300

ep: 72 layer4.1.conv2 maxeig: 1.2e-03 mineig: 1.1e-09 con: 1.1e+06  $10^{1}$ 10<sup>0</sup> 10<sup>10</sup>  $10^{-10}$  $10^{-6}$ 10-2 10<sup>2</sup> 10<sup>6</sup>  $10^{-4}$  $10^{-6}$ 10-8

200

300

400

500

100

eigen value

