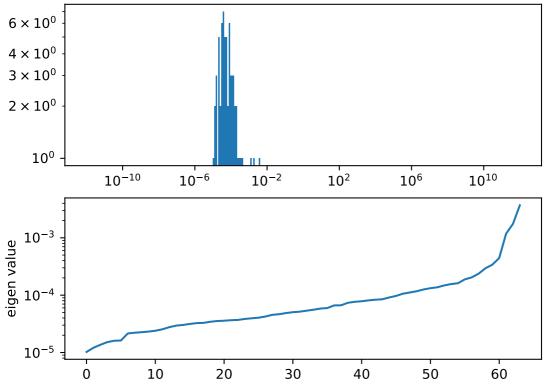
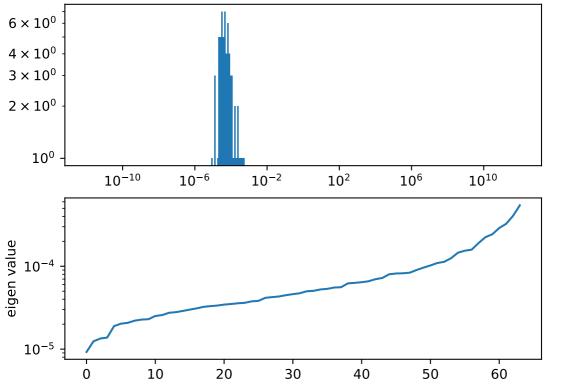
ep: 52 conv1 maxeig: 1.3e+00 mineig: 3.4e-09 con: 4.0e+08  $4 \times 10^{0}$  $3 \times 10^{0}$  $2 \times 10^{0}$ 10<sup>0</sup> 10 10  $10^{-10}$  $10^{-6}$ 10<sup>2</sup> 10<sup>6</sup>  $10^{-2}$  $10^{-1}$ eigen value 10<sup>-3</sup>  $10^{-5}$  $10^{-7}$ 50 60 10 20 30 40

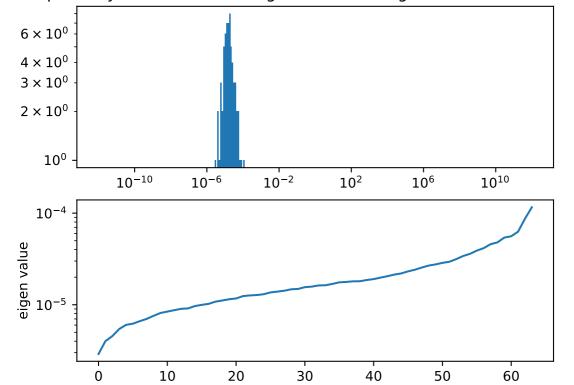
ep: 52 layer1.0.conv1 maxeig: 3.7e-03 mineig: 1.0e-05 con: 3.6e+02



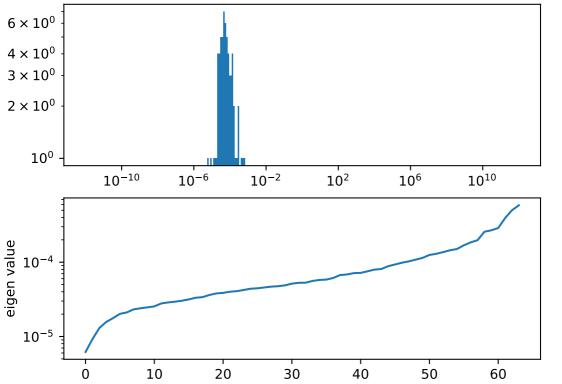
ep: 52 layer1.0.conv2 maxeig: 5.4e-04 mineig: 9.2e-06 con: 5.9e+01



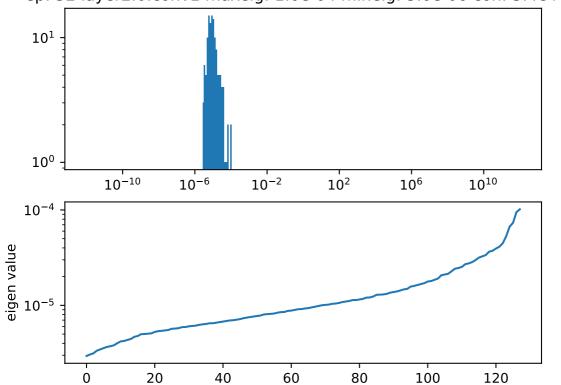
ep: 52 layer1.1.conv1 maxeig: 1.2e-04 mineig: 2.9e-06 con: 4.0e+01



ep: 52 layer1.1.conv2 maxeig: 5.8e-04 mineig: 6.2e-06 con: 9.4e+01



ep: 52 layer2.0.conv1 maxeig: 1.0e-04 mineig: 3.0e-06 con: 3.4e+01



ep: 52 layer2.0.conv2 maxeig: 1.6e-04 mineig: 1.8e-07 con: 9.3e+02  $10^{1}$ 10<sup>0</sup> 10 10 10<sup>2</sup> 10-10 10-2 10<sup>6</sup>  $10^{-6}$  $10^{-4}$ eigen value 10<sup>-6</sup>

60

80

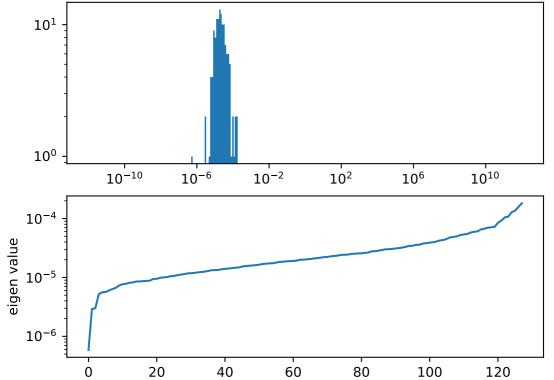
20

40

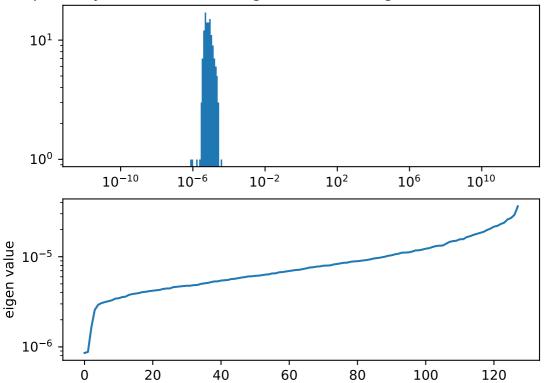
100

120

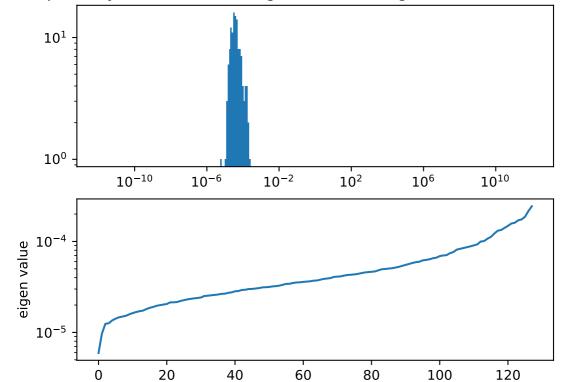
ep: 52 layer2.0.shortcut.0 maxeig: 1.8e-04 mineig: 5.9e-07 con: 3.1e+02



ep: 52 layer2.1.conv1 maxeig: 3.6e-05 mineig: 8.6e-07 con: 4.2e+01



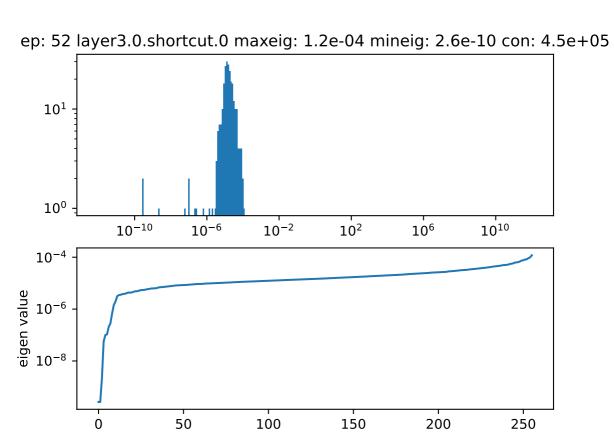
ep: 52 layer2.1.conv2 maxeig: 2.4e-04 mineig: 5.9e-06 con: 4.1e+01

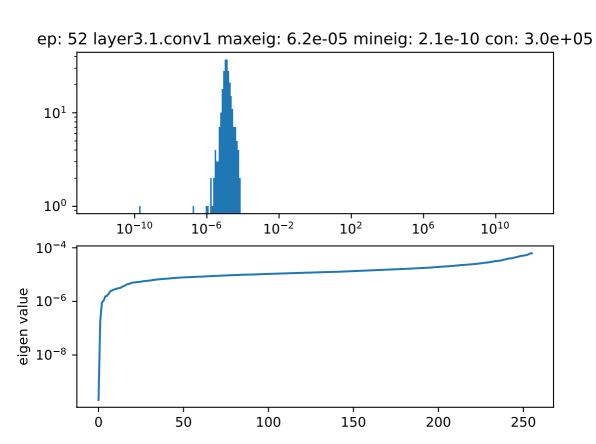


ep: 52 layer3.0.conv1 maxeig: 6.8e-05 mineig: 1.1e-10 con: 6.5e+05 10<sup>1</sup> 10<sup>0</sup> 1010 10-10 10-2 10<sup>2</sup> 10<sup>6</sup>  $10^{-6}$ 10<sup>-5</sup>  $10^{-9}$ 250 50 100 150 200

eigen value

ep: 52 layer3.0.conv2 maxeig: 1.6e-04 mineig: 5.3e-10 con: 3.1e+05 10<sup>1</sup> 10<sup>0</sup> 1010 10-10  $10^{-6}$ 10-2 10<sup>2</sup> 10<sup>6</sup>  $10^{-4}$ eigen value 10-8 250 50 100 150 200





ep: 52 layer3.1.conv2 maxeig: 3.0e-04 mineig: 2.4e-06 con: 1.2e+02  $10^{1}$ 10<sup>0</sup> 10<sup>10</sup> 10-10 10<sup>2</sup> 10-6 10-2 10<sup>6</sup> eiden value 10<sup>-4</sup> 250 50 100 150 200

ep: 52 layer4.0.conv1 maxeig: 1.7e-04 mineig: 1.1e-06 con: 1.6e+02 10<sup>1</sup> 10<sup>0</sup> 10<sup>10</sup> 10-10 10<sup>2</sup> 10-6 10-2 10<sup>6</sup>  $10^{-4}$ eigen value 10<sup>-5</sup>  $10^{-6}$ 100 500 200 300 400

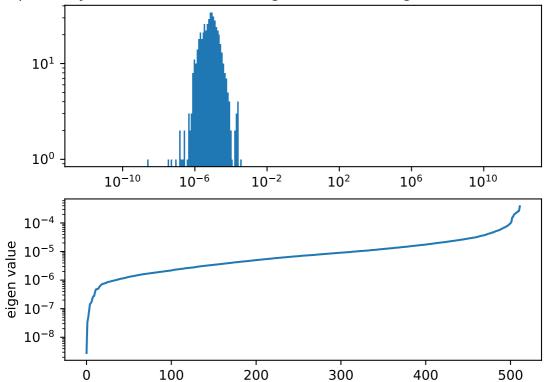
ep: 52 layer4.0.conv2 maxeig: 4.6e-04 mineig: 5.9e-09 con: 7.8e+04  $10^{1}$ 10<sup>0</sup> 1010  $10^{-10}$ 10-2 10<sup>2</sup> 10<sup>6</sup>  $10^{-6}$  $10^{-4}$ eigen value 10<sup>-7</sup> 100 500

200

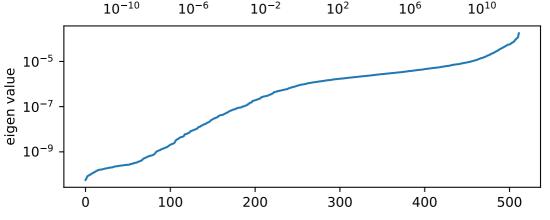
300

400

ep: 52 | Jayer4.0.shortcut.0 maxeig: 3.8e-04 mineig: 2.8e-09 con: 1.4e+05



ep: 52 layer4.1.conv1 maxeig: 1.8e-04 mineig: 5.7e-11 con: 3.1e+06  $10^{1}$ 10<sup>0</sup> 10<sup>10</sup> 10<sup>2</sup> 10-10  $10^{-6}$ 10-2 10<sup>6</sup>



ep: 52 layer4.1.conv2 maxeig: 1.2e-03 mineig: 2.5e-08 con: 4.8e+04  $10^{1}$ 10<sup>0</sup> 10 10  $10^{-10}$  $10^{-6}$  $10^{-2}$ 10<sup>2</sup> 10<sup>6</sup> 10<sup>-3</sup>  $10^{-4}$ eigen value  $10^{-5}$  $10^{-6}$  $10^{-7}$ 

200

300

500

400

100

