PCA ratio: [ 0.61043701 0.29535381]

PCA covariance:

[[ 1.68454947e+10 9.91437898e+02 -1.61411246e+04 -5.40650527e+03

1.30196508e+05 -2.62505994e+04 -3.01485797e+04 -2.90084148e+04

-2.61595162e+04 -2.32580416e+04 -2.19884841e+04 2.72008221e+09

2.59848121e+09 2.57083720e+09 2.45219018e+09 2.31870732e+09

2.22809647e+09 3.51627261e+08 4.46264772e+08 3.96221493e+08

3.37820677e+08 3.48787813e+08 4.07729742e+08]

[ 9.91437898e+02 4.27917375e+09 -2.10903422e-03 -4.86755620e-04

8.76775195e-03 -6.40273784e-03 -7.90753531e-03 -7.71862983e-03

-7.40325425e-03 -7.11513593e-03 -7.10301737e-03 -6.77572751e+02

-6.79763281e+02 -6.56337003e+02 -5.98825156e+02 -5.51609329e+02

-5.24601104e+02 -1.27855809e+01 -8.53519001e+00 -4.54264575e+00

-1.66671076e+00 4.40904496e-01 4.14320273e+00]

[ -1.61411246e+04 -2.10903422e-03 4.27917375e+09 7.15920322e-03

-1.61869775e-01 4.91651888e-02 5.84415491e-02 5.66241724e-02

5.26417212e-02 4.87037308e-02 4.73869896e-02 -3.12319966e+02

-1.82527320e+02 -2.38336390e+02 -3.24409153e+02 -3.58883486e+02

-3.64302333e+02 -3.07132190e+02 -4.17222648e+02 -3.81260599e+02

-3.32932995e+02 -3.51450291e+02 -4.23779064e+02]

[ -5.40650527e+03 -4.86755620e-04 7.15920322e-03 4.27917375e+09

-5.56289469e-02 1.24069463e-02 1.43916208e-02 1.38756552e-02

1.26266714e-02 1.13631365e-02 1.08395467e-02 -9.41051693e+02

-8.90636523e+02 -8.85322399e+02 -8.51457806e+02 -8.08865620e+02

-7.78657515e+02 -1.40870384e+02 -1.80760669e+02 -1.61270415e+02

-1.38066956e+02 -1.43104632e+02 -1.68220098e+02]

[ 1.30196508e+05 8.76775195e-03 -1.61869775e-01 -5.56289469e-02

4.27917375e+09 -2.44166106e-01 -2.76865543e-01 -2.65687855e-01

-2.36752840e-01 -2.07071474e-01 -1.93352647e-01 3.39099819e+04

3.26025738e+04 3.21517592e+04 3.04931563e+04 2.87394299e+04

2.75813407e+04 3.90331508e+03 4.90447888e+03 4.33501219e+03

3.68189061e+03 3.78754234e+03 4.40431127e+03]

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-2.44166106e-01 4.27917375e+09 1.65192509e-01 1.60981445e-01

1.53355133e-01 1.46199581e-01 1.45175209e-01 1.08115389e+04

1.09286932e+04 1.05130384e+04 9.52461203e+03 8.73588093e+03

8.29370121e+03 1.46993934e+01 -1.23537629e+02 -1.65800273e+02

-1.82151514e+02 -2.28028760e+02 -3.33630498e+02]

[ -3.01485797e+04 -7.90753531e-03 5.84415491e-02 1.43916208e-02

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1.88752518e-01 1.80394440e-01 1.79426150e-01 1.45266090e+04

1.46436536e+04 1.41057264e+04 1.28123997e+04 1.17699995e+04

1.11813918e+04 1.12714405e+02 -3.84445904e+01 -1.05759718e+02

-1.42234659e+02 -1.97861935e+02 -3.16902917e+02]

[ -2.90084148e+04 -7.71862983e-03 5.66241724e-02 1.38756552e-02

-2.65687855e-01 1.60981445e-01 1.97725522e-01 4.27917375e+09

1.84124156e-01 1.76054336e-01 1.75164053e-01 1.43966322e+04

1.45057702e+04 1.39761490e+04 1.27002982e+04 1.16701740e+04

1.10877699e+04 1.27502952e+02 -1.64276315e+01 -8.49298108e+01

-1.23543191e+02 -1.77650745e+02 -2.91744172e+02]

[ -2.61595162e+04 -7.40325425e-03 5.26417212e-02 1.26266714e-02

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4.27917375e+09 1.68739676e-01 1.68103166e-01 1.46682920e+04

1.47527248e+04 1.42267389e+04 1.29498496e+04 1.19117946e+04

1.13220568e+04 1.91547856e+02 6.78287515e+01 -8.94797089e+00

-5.79074351e+01 -1.09048221e+02 -2.10145578e+02]

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1.68739676e-01 4.27917375e+09 1.61669804e-01 1.50709145e+04

1.51291412e+04 1.46032426e+04 1.33158551e+04 1.22615708e+04

1.16595420e+04 2.62496024e+02 1.59815426e+02 7.34904499e+01

1.29375082e+01 -3.53571412e+01 -1.23084756e+02]

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1.21478259e+04 3.13249348e+02 2.21338369e+02 1.26973719e+02

5.77085653e+01 1.00550786e+01 -7.13614878e+01]

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1.46682920e+04 1.50709145e+04 1.56809702e+04 8.26510939e+09

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3.14917023e+09 2.30430300e+08 2.63161600e+08 2.22093150e+08

1.80956640e+08 1.78600070e+08 1.94968273e+08]

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3.10547955e+09 2.25747155e+08 2.57461052e+08 2.17127760e+08

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3.02403323e+09 2.20544399e+08 2.51698616e+08 2.12343251e+08

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3.49885864e+09 3.40687524e+09 7.43677177e+09 2.93628293e+09

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2.25747155e+08 2.20544399e+08 2.05657652e+08 1.91934191e+08

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2.57461052e+08 2.51698616e+08 2.35000422e+08 2.19479046e+08

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