

EIGEN SPECTRAL ANALYSIS

PDB USED – 3SN6.PDB

nodes = 349

average degree = 7.28080229226

avg clustering coeff = 0.586316501073

edges = 1270

average shortest path = 8.51743898824

FOR ADJACENCY MATRIX:

Largest eigen value = 9.22453545789

Corresponding eigen vector = [1.46993370e-02 -6.48303306e-04

1.34716077e-02 -1.55348996e-02

-6.66737292e-03	-5.78756884e-04	-5.55857355e-03	-5.82361164e-03
-6.93504362e-03	-2.59442474e-02	-5.20038830e-02	1.65517361e-02
-3.18753382e-03	-1.21719642e-02	2.99878619e-02	-4.00092780e-04
5.37683358e-04	2.16854476e-02	-6.69816677e-03	-1.15938256e-02
-6.10369103e-03	2.76728282e-03	2.83111451e-02	-1.01644830e-03
-6.03324681e-02	-1.26141501e-02	1.60261139e-02	1.07608933e-02
-3.68829749e-02	-1.07853434e-02	2.04057005e-02	1.20055727e-03
-1.43649324e-03	1.29841318e-02	-1.74216677e-02	1.80598954e-02
-6.00914972e-02	-8.67175454e-03	8.66410447e-02	-3.77178717e-02
7.74655705e-02	1.20443548e-02	-2.84865908e-03	-3.91318565e-03
1.13930999e-03	7.07339762e-03	5.43120442e-02	7.55817515e-02
3.53451497e-02	-5.88437352e-02	1.32044874e-01	9.80208482e-02
-6.77357374e-02	-2.01958498e-02	-1.15832396e-02	3.26180147e-02
-4.70528516e-02	1.86259538e-02	6.68514187e-03	-5.02769232e-04
2.74967548e-02	-1.91858348e-02	1.43876668e-02	-5.48071031e-03
1.97068806e-02	-1.77856296e-02	-3.25507413e-02	-6.84265438e-04
-1.19474619e-02	-3.53962672e-03	4.24590410e-03	-4.65895412e-02
6.88108495e-03	2.81408549e-02	3.49205575e-03	1.58305826e-03
-1.24639732e-02	5.94456482e-03	-1.73046074e-02	8.26412733e-02
-5.52357434e-02	-2.80523188e-02	-1.20265843e-01	8.21864852e-02
6.84290290e-03	-2.17184823e-02	-3.63677391e-02	4.04862631e-03
2.75859735e-02	6.97050501e-02	4.10105117e-03	7.92076356e-02
5.98991766e-02	-2.92578870e-02	-3.88442744e-02	1.56849298e-01
1.56468167e-02	-2.08989844e-02	9.48744207e-02	5.21010710e-02

1.96643904e-02	-2.38351523e-03	-8.61587006e-02	9.44111383e-04
-2.28922663e-02	3.03160950e-03	1.66408763e-02	7.16876761e-04
4.48820959e-02	2.05791148e-02	6.65637679e-03	7.14323801e-03
1.37005803e-02	1.12754774e-01	-1.38064729e-04	5.82250782e-02
1.13070880e-01	2.45209806e-03	-7.64112430e-03	-6.63416732e-03
-7.17184963e-02	-5.94125886e-02	-1.33276417e-02	-5.94846296e-03
-1.41472262e-02	4.85833473e-02	7.03551190e-02	5.16320203e-03
-5.44909813e-03	1.66992690e-01	4.89268657e-03	1.11790019e-01
-2.47816579e-03	1.22612594e-02	4.10962008e-03	-1.45049511e-01
-3.67744613e-02	1.18242186e-01	-9.98147517e-02	-5.04857191e-02
3.86938418e-02	-1.00194316e-01	1.13717104e-02	-2.16475565e-03
1.28611820e-01	-7.52108357e-02	2.81560015e-02	2.24877396e-02
1.93191861e-02	-2.71440679e-03	-2.45539266e-15	-2.01976023e-15
-1.59594560e-16	-4.10955991e-15	-5.98018813e-16	2.86229374e-16
2.56430077e-15	-3.24705270e-02	1.63752958e-01	-7.12924727e-02
-3.23487264e-02	-3.83026088e-02	7.89169377e-02	5.40317943e-02
3.94124072e-02	2.53612101e-02	1.75299407e-01	-1.44116066e-01
-1.66746096e-02	-3.86366457e-02	-2.76989175e-02	3.35413012e-02
9.28298237e-02	3.62346428e-02	7.79927515e-03	6.26365866e-02
-1.14310263e-01	4.50507318e-02	4.81050404e-03	2.46221058e-02
-9.40326360e-02	-5.51405205e-03	2.21301987e-02	4.17783421e-03
1.70810012e-02	9.31834258e-03	2.72641990e-02	-6.44340348e-02
-1.86053639e-02	-1.02965107e-02	6.62848011e-05	3.03190138e-02
-1.87556754e-03	-2.97664616e-02	-9.31105112e-02	-3.40316735e-02
-9.05742294e-03	-3.21827224e-02	-6.07568202e-03	2.66789656e-02
-1.59859846e-02	-4.15022420e-02	2.82027262e-03	-4.39914187e-03
-1.74010600e-02	-1.74391721e-02	6.88972971e-03	-1.37151559e-01
8.53952426e-02	-3.40314095e-02	-2.57853466e-02	-2.59382337e-02
4.54646044e-02	-1.07040210e-03	-4.99758992e-02	-1.67388825e-02
1.85885673e-02	2.14875830e-03	-3.72879134e-02	-1.33069937e-02
2.99232387e-02	-6.23577031e-02	-8.41240190e-03	-5.65612978e-02
-4.72348106e-03	-7.16130205e-02	1.21613039e-01	-1.70339914e-02
1.20508347e-01	-3.41157562e-02	8.40924210e-02	2.45782464e-02
1.07532376e-01	3.89043812e-02	4.65350388e-02	2.57836859e-02
-4.07346928e-02	-7.73367643e-02	-5.01882794e-02	-6.19994794e-02
-2.15330989e-02	-1.33811569e-02	1.78652993e-02	3.06710040e-03
-1.31802314e-02	4.68726797e-03	2.05349963e-02	-2.11940469e-02
-5.38748968e-02	1.73211898e-03	2.46923021e-03	-4.89560038e-02
-2.66806054e-02	9.97233615e-02	4.37482781e-03	3.13876755e-02

-8.37533507e-03	9.37303820e-04	-8.56176220e-02	-1.05281837e-01
-6.11006935e-02	-3.22358521e-02	-2.87111944e-03	-4.12773482e-02
-1.13182139e-01	-7.50929032e-02	-9.11719901e-02	-4.41743709e-02
9.80834793e-02	1.82452060e-01	1.70252742e-01	9.52352997e-02
1.84034180e-03	1.29369768e-01	2.88373507e-02	7.68435670e-03
5.92585409e-02	-3.56603913e-02	-2.34758474e-01	-3.53429797e-03
8.91192665e-04	-1.28948578e-02	5.68711877e-02	-9.68430425e-02
-7.56229569e-02	3.19060137e-03	-5.06841613e-02	-1.04164589e-01
1.79354170e-03	1.15358388e-02	1.30292150e-02	-3.58272084e-02
-1.85213211e-02	5.82311628e-03	-2.44582220e-03	-1.42800824e-02
1.47766430e-01	1.03354757e-01	2.75730678e-02	1.01490152e-02
2.07901942e-02	4.39216368e-03	-6.27540656e-05	-1.34015618e-02
4.46942467e-02	1.47243335e-02	1.94091165e-02	1.33801893e-02
1.15672290e-03	2.06159916e-02	2.52680227e-02	2.02042853e-02
2.12891430e-02	-9.97524367e-04	2.09933331e-02	7.81498418e-03
4.65076267e-05	-1.65839045e-01	-1.03070694e-03	4.53930815e-03
1.59587107e-02	1.39545375e-02	-6.35390021e-03	3.58282458e-03
-7.92625685e-03	1.14578236e-03	2.76285590e-03	-2.75494285e-03
3.10766733e-05	3.76011594e-03	-3.02127130e-03	-8.25045218e-03
9.09960675e-04	-3.70732921e-03	-1.37901099e-01	-3.82652274e-02
1.69324376e-02	2.25167972e-05	1.46484033e-03	-1.19336506e-04
-3.80717923e-02	1.37094654e-02	6.91367776e-02	-2.60265600e-02
6.44955914e-03	2.01986365e-02	-2.05820057e-05	2.80046697e-03
-1.91052511e-03]			

FOR LAPLACIAN MATRIX:

Largest eigen value = 14.3542765377

Corresponding eigen vector = [-3.95505678e-02 5.48940488e-02
3.40840481e-02 -2.01612113e-01

-1.16253572e-01	4.74515330e-02	4.72018195e-02	6.04604742e-03
-3.63800063e-02	-7.76398883e-03	1.75815990e-02	-9.00501520e-02
5.72719215e-02	-1.61011142e-01	-7.41862824e-03	7.79010306e-03
-1.04879376e-01	7.11472009e-03	6.79535273e-03	-1.11888167e-02
9.05257618e-04	1.85919920e-02	2.84763174e-02	-1.17199175e-02
3.26806907e-02	1.43425120e-02	3.24765672e-02	2.82825439e-02
1.09305061e-01	-1.09138553e-02	2.85429325e-02	8.10714993e-03
-1.35989293e-02	8.60468011e-02	-1.11856922e-01	6.33810630e-02
1.21214778e-01	3.06296848e-03	-8.32176112e-02	-9.55734898e-02

-4.96688899e-03	-1.54128241e-01	-7.37019681e-02	2.28345564e-02
1.07276937e-01	-6.60877719e-03	1.97417309e-03	-6.31133200e-03
-3.46650779e-02	6.42135202e-03	6.73054368e-02	2.99515959e-04
4.36002772e-02	-3.52816258e-02	2.59987647e-01	9.69421572e-02
-2.68953304e-01	-4.78459544e-02	-1.00082970e-02	3.29388844e-02
2.61480545e-01	-3.88825363e-02	1.57460893e-01	-4.57736316e-02
-1.04413732e-01	-3.53373310e-01	-1.25083406e-01	1.04636634e-01
2.97814469e-02	-3.45608140e-02	6.27153204e-02	1.38638196e-02
1.45156800e-02	1.31496101e-01	6.25951911e-02	1.16359985e-01
1.70095516e-01	1.16562460e-01	3.55827398e-02	1.23512311e-15
-2.41885207e-14	-1.42364384e-01	4.33984821e-02	9.32594582e-03
5.17842435e-03	1.31292650e-01	4.90513094e-03	-5.00309006e-03
-1.51446391e-02	4.47402811e-02	-5.13275438e-02	1.16660009e-02
3.18657048e-01	-5.87086594e-03	1.06528981e-02	-6.14317425e-03
5.68580289e-03	-5.43492769e-03	-1.13796033e-03	3.72721716e-03
-1.70824535e-03	-3.39761046e-03	1.59255250e-03	-1.62776720e-01
-4.83766034e-02	3.78288688e-03	1.11990074e-03	-2.11805502e-04
-3.10167817e-16	9.12029783e-16	2.84192429e-03	-4.91054561e-04
-9.30724527e-05	-1.08730152e-05	3.54868241e-04	-4.44250853e-04
4.00079860e-04	-2.69603910e-05	-6.87765571e-06	7.84214128e-05
2.53236498e-04	-2.39475588e-06	-1.88289261e-06	-5.69094187e-04
-6.67698416e-05	7.38234848e-04	-1.92310878e-03	-3.18189329e-03
-4.97451192e-05	-4.59260358e-03	-1.07360403e-02	-1.89395418e-03
1.17341685e-02	7.05683872e-03	-5.30791028e-04	5.79202924e-02
6.70365610e-02	-2.42385255e-03	-3.13466348e-05	1.17994118e-05
9.74666619e-03	3.08343625e-02	1.60368916e-01	-2.75551749e-03
1.81376164e-03	-2.10143568e-03	-1.21967666e-01	5.71702544e-02
1.78683013e-02	2.36597061e-02	-3.42995127e-03	-1.53970726e-03
1.95994631e-02	-8.18073176e-03	6.47281212e-03	-4.11227205e-05
-2.95793496e-02	-1.24419002e-02	-6.83168939e-02	-1.13650277e-02
-6.05814024e-02	-1.98555246e-02	5.89827488e-04	4.67853513e-03
-3.13175483e-03	-7.46384726e-03	-3.56527067e-03	4.36459369e-03
-3.53701955e-04	-7.14210144e-04	6.95982951e-03	-1.36104516e-03
-3.04954642e-03	-1.51320957e-02	1.29531559e-04	2.02293494e-02
3.73699891e-03	-3.52779295e-03	-1.05409539e-03	-2.99598629e-03
-3.29424033e-04	-1.05773666e-03	-8.59229229e-04	8.82812593e-03
-6.48331821e-03	-1.53570123e-02	-1.02730644e-04	1.06034096e-03
-1.90746435e-03	-6.69083661e-05	3.08527479e-04	-1.72826679e-04
3.38718820e-03	3.63099652e-03	-4.45601993e-02	-3.19766070e-04

1.09969971e-02	-4.40740048e-03	-1.45222287e-03	-1.45885930e-04
-2.27303364e-03	1.66615831e-02	2.81402294e-04	-5.26739815e-03
5.98004078e-05	2.14847804e-03	-3.69573437e-03	4.30595867e-03
5.35474144e-04	4.12250813e-03	-2.89426078e-03	9.15976609e-03
2.47881745e-02	3.47070943e-02	-1.56629381e-02	-2.75110660e-02
4.50638787e-03	2.64009027e-03	-2.76091667e-03	-4.03223228e-03
-6.67774996e-04	5.09612925e-03	-2.56419077e-02	4.65752145e-03
-1.10465059e-02	-5.76513065e-04	1.00160054e-02	8.95050321e-03
-2.09338844e-02	3.11426254e-02	-5.93079800e-03	-9.27915849e-03
2.61422828e-15	-3.20621722e-03	2.90841601e-05	4.47396200e-03
-3.30262088e-03	8.17869922e-04	2.96486133e-04	-4.60909761e-03
-1.54240887e-04	3.30163439e-05	-5.03524131e-03	-1.67707701e-02
8.10890106e-03	1.21464538e-04	5.49345081e-03	3.34711108e-03
1.75731792e-04	-5.37272924e-03	1.51434847e-03	2.60759565e-03
2.00243531e-04	-2.90933554e-06	-2.99863422e-04	5.70006824e-04
-3.23037080e-03	6.56147876e-04	1.27444715e-04	1.85476737e-03
-1.38804386e-02	6.86642127e-03	9.23669263e-03	1.17894422e-02
-1.17507997e-03	1.22335486e-02	9.39559580e-03	-5.82257302e-04
-7.70446851e-03	-5.22415938e-04	5.99572020e-04	-5.18707693e-06
-1.57952344e-03	2.43401645e-05	-1.19582898e-02	-1.21332956e-02
-3.31434071e-04	2.70079847e-02	-5.06426449e-02	-1.84087760e-02
-2.68919073e-02	1.88740879e-04	2.55979087e-03	9.82236867e-03
6.13126258e-04	2.00423794e-02	-1.12670452e-03	-1.64320693e-03
1.09997634e-02	-5.66661520e-05	-1.09747743e-03	-1.76483522e-04
4.13000047e-03	5.37100834e-03	-2.24459475e-02	5.76788794e-03
1.33184847e-04	-9.00068824e-03	1.97767840e-02	2.79563428e-05
-2.46414256e-03	1.38125502e-03	5.65058299e-03	2.25326171e-02
1.08692369e-03	-2.25976254e-02	4.96582674e-04	-4.33341974e-04
3.87083405e-02	-1.05186222e-03	1.11551252e-02	5.51098846e-03
1.25281583e-02	-3.54971418e-02	3.70972057e-04	1.02248600e-04
-5.15651531e-02	9.84755612e-05	-3.25430270e-02	-2.37227999e-03
2.45097191e-02	-2.63799342e-02	7.81742390e-04	4.44797548e-03
-3.13124546e-06	-9.13611215e-03	2.09940111e-03	1.08232540e-03
2.03221832e-05	-8.28502521e-07	-7.95100086e-03	3.59583252e-06
-1.74551347e-03	2.04459724e-03	-1.48118854e-06	-1.67196292e-03
-4.61148395e-04	-1.97088522e-03	1.97179443e-06	1.29837223e-03
5.83600502e-04	-1.63829705e-03	1.19958232e-05	-4.05502108e-04
-1.61061989e-04	4.52746393e-04	1.13410455e-09	-3.59826196e-04
1.29816722e-04]			