Klein Bottle Horizontal Glued Comparison of Level 4 Eigenfunctions and Level 3 Eigenfunctions By Averaging (First 150)

SPUR 2016

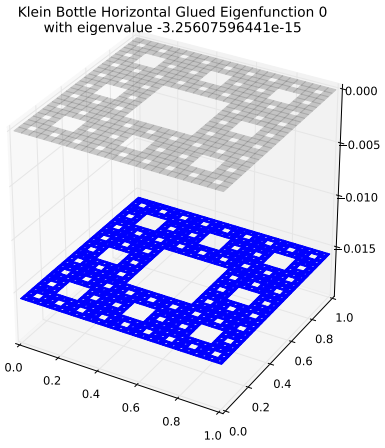
May 23, 2018

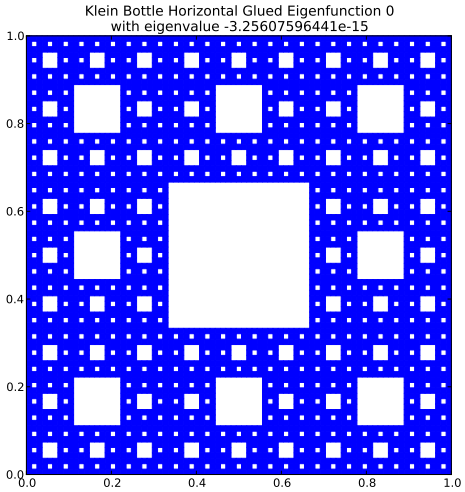
Key to Dot Value

Dot values are in general between 0 and 1; those close to 0 are better matches, while those close to 1 are not good matches. Dot value 2 indicates the eigenvalue averages to the zero function. Dot value 3 indicates the projection onto the closest eigenspace is zero.

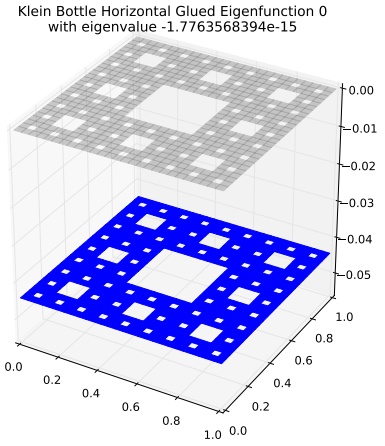
1 $M = 4$ Eigenfunction 0

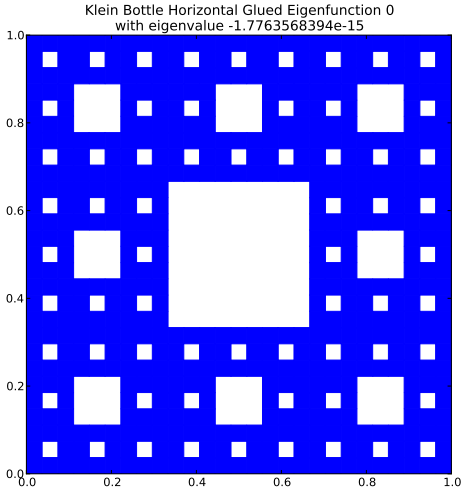
$M = 4$ Eigenfunction 0 has eigenvalue -3.25607596441e-15





Compare to $m = 3$ eigenspace with eigenvalue 2.67841304691e-15

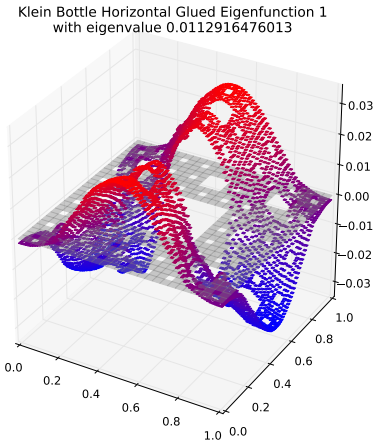


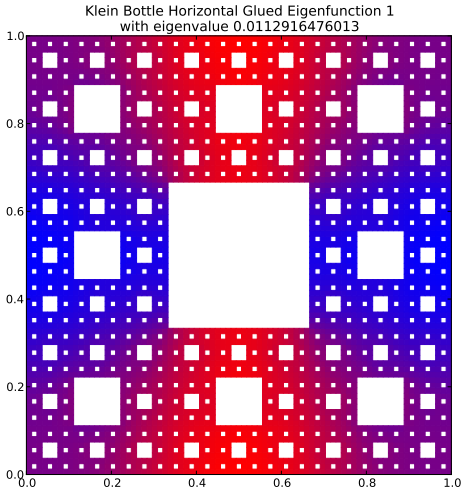


Eigenvalue Ratio: $\lambda_4/\lambda_3 = -1.21567357513$
Dot Value: 0.0

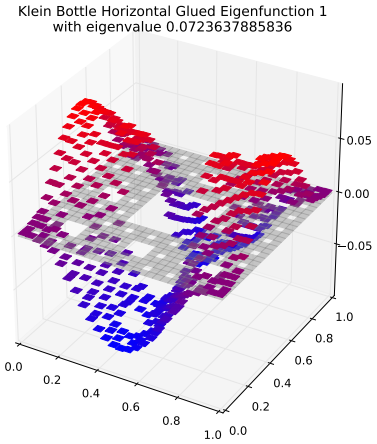
2 $M = 4$ Eigenfunction 1

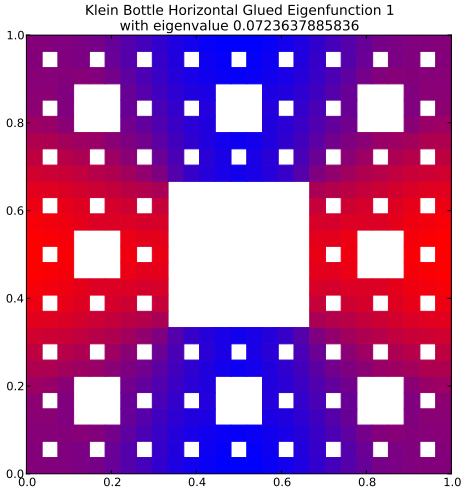
$M = 4$ Eigenfunction 1 has eigenvalue 0.0112916476013





Compare to $m = 3$ eigenspace with eigenvalue 0.0723637885836

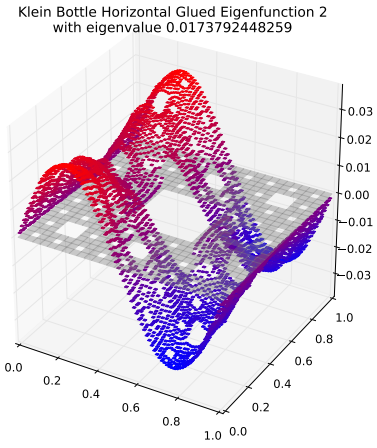


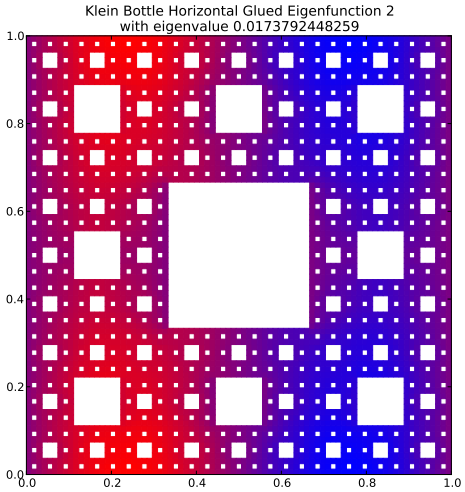


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.156040028063$
Dot Value: 0.00023557349332292699

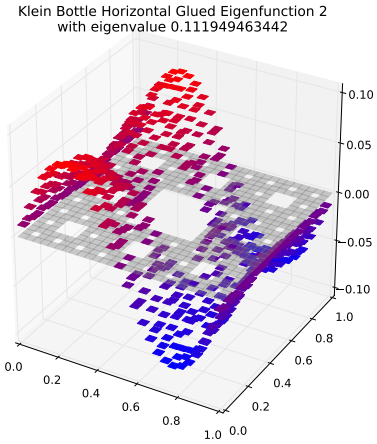
3 $M = 4$ Eigenfunction 2

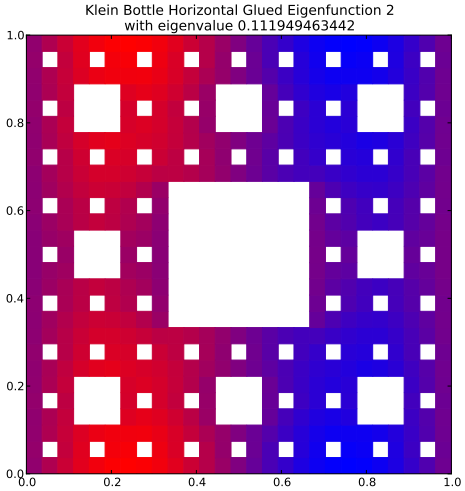
$M = 4$ Eigenfunction 2 has eigenvalue 0.0173792448259





Compare to $m = 3$ eigenspace with eigenvalue 0.111949463442

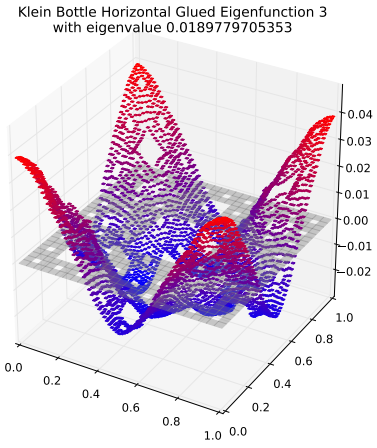


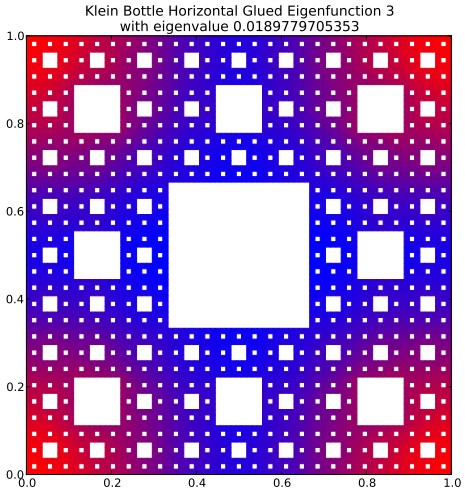


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.155241876928$
Dot Value: 0.0001676520817879279

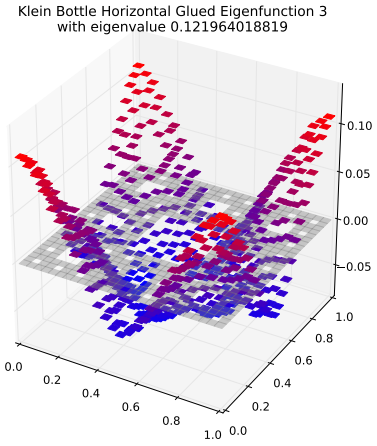
4 $M = 4$ Eigenfunction 3

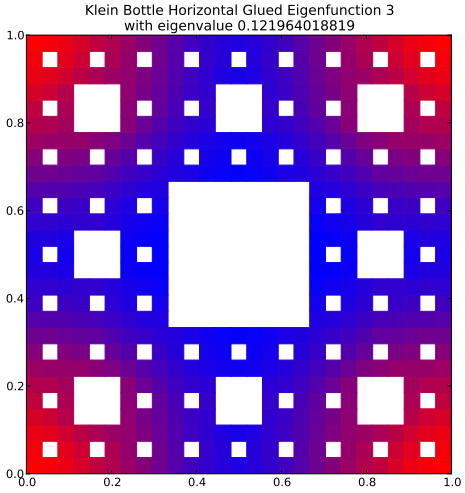
$M = 4$ Eigenfunction 3 has eigenvalue 0.0189779705353





Compare to $m = 3$ eigenspace with eigenvalue 0.121964018819

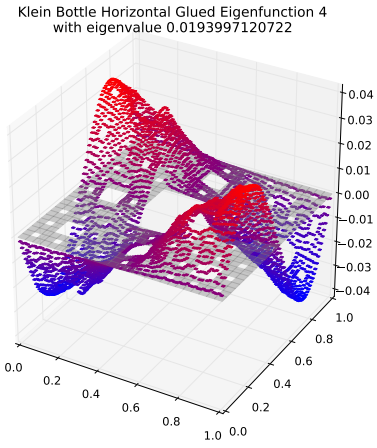


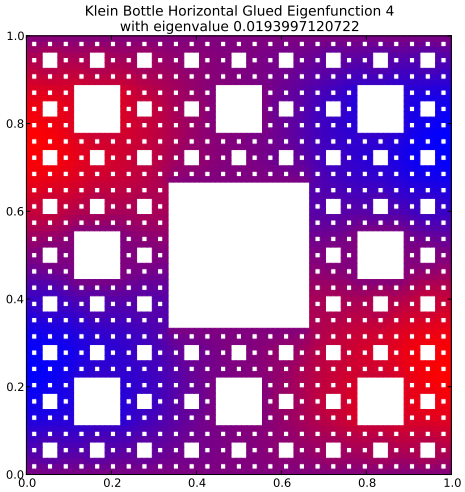


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.155603027179$
Dot Value: 0.00029149024711627725

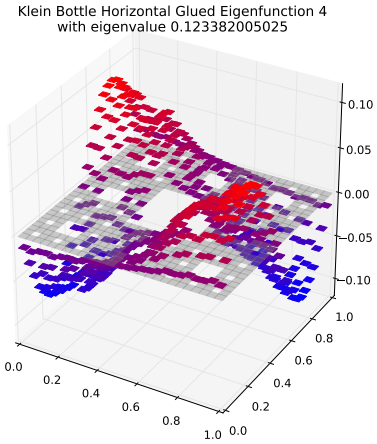
5 $M = 4$ Eigenfunction 4

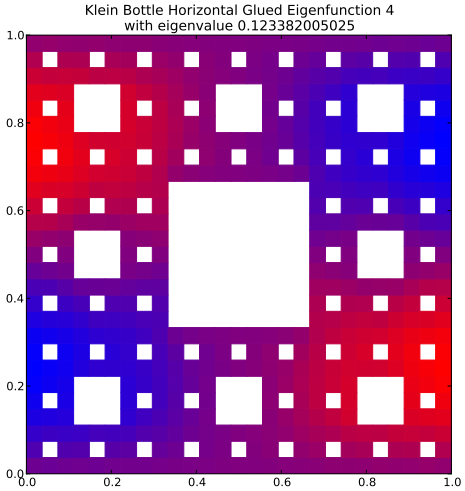
$M = 4$ Eigenfunction 4 has eigenvalue 0.0193997120722





Compare to $m = 3$ eigenspace with eigenvalue 0.123382005025

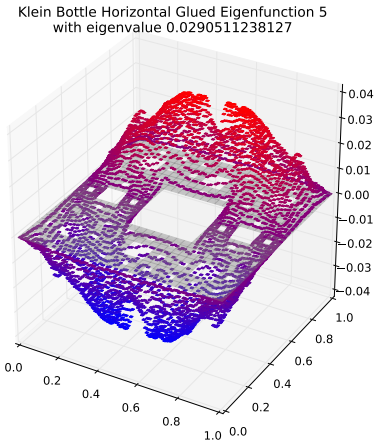


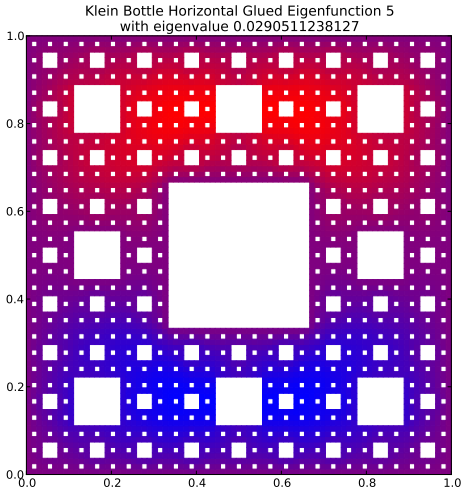


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.157232913083$
Dot Value: 0.0001966693692091459

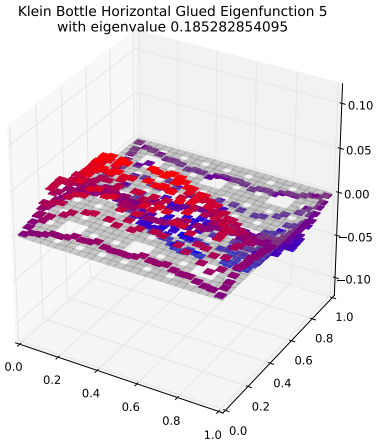
6 $M = 4$ Eigenfunction 5

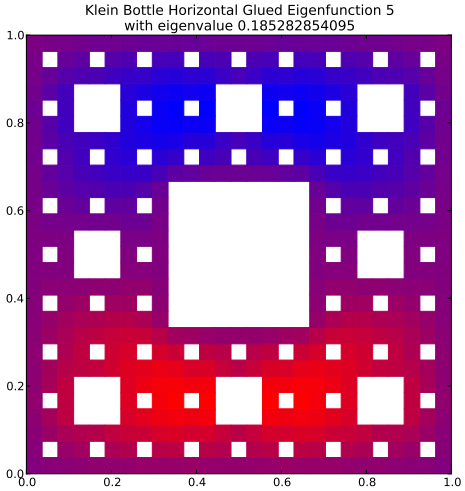
$M = 4$ Eigenfunction 5 has eigenvalue 0.0290511238127





Compare to $m = 3$ eigenspace with eigenvalue 0.185282854095

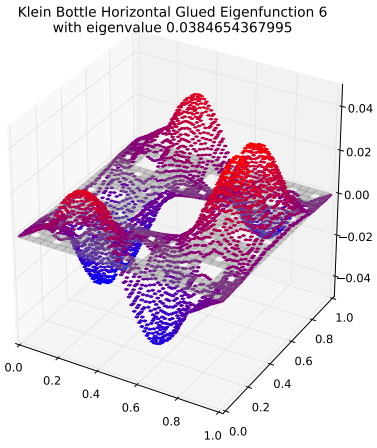


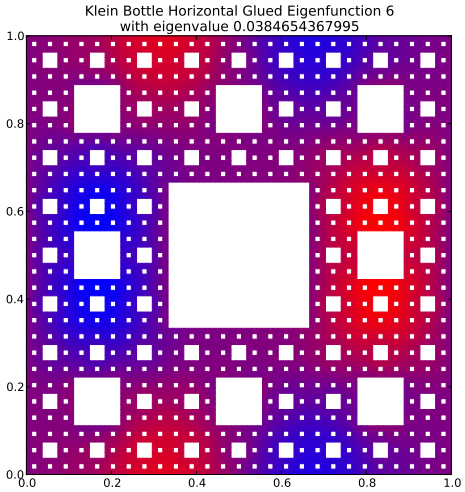


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.156793373863$
Dot Value: 0.00011579282239548849

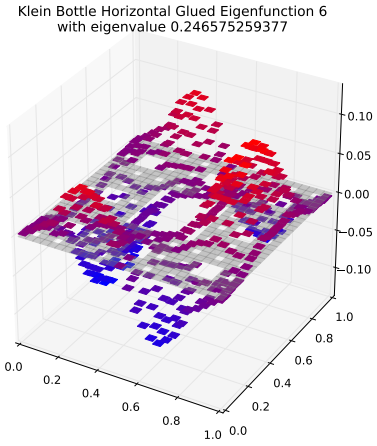
7 $M = 4$ Eigenfunction 6

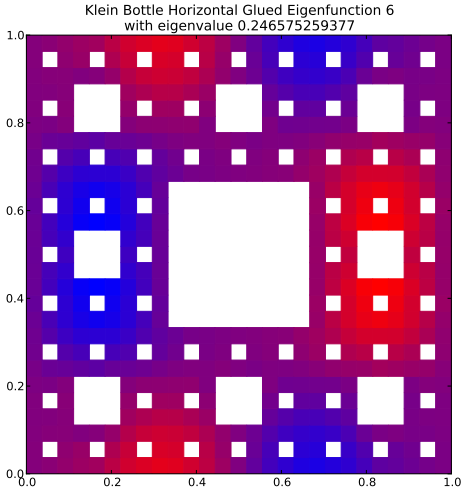
$M = 4$ Eigenfunction 6 has eigenvalue 0.0384654367995





Compare to $m = 3$ eigenspace with eigenvalue 0.246575259377

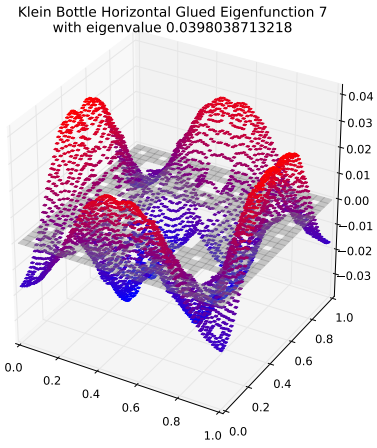


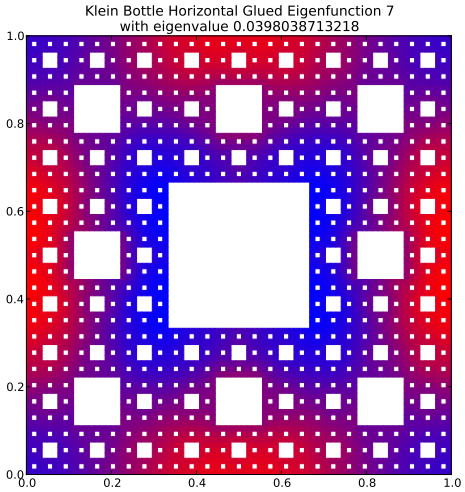


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.155998768477$
Dot Value: 0.0004002278132091419

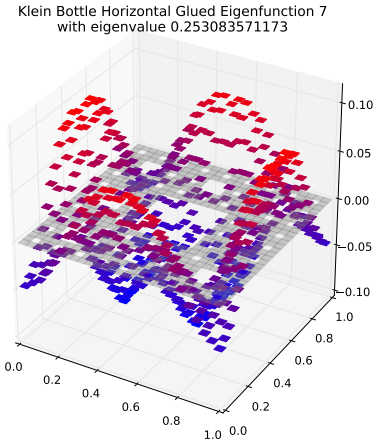
8 $M = 4$ Eigenfunction 7

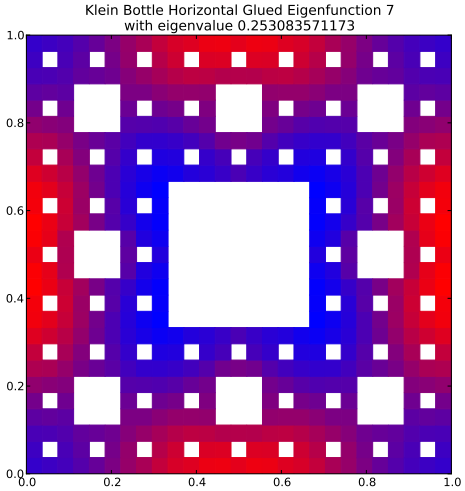
$M = 4$ Eigenfunction 7 has eigenvalue 0.0398038713218





Compare to $m = 3$ eigenspace with eigenvalue 0.253083571173

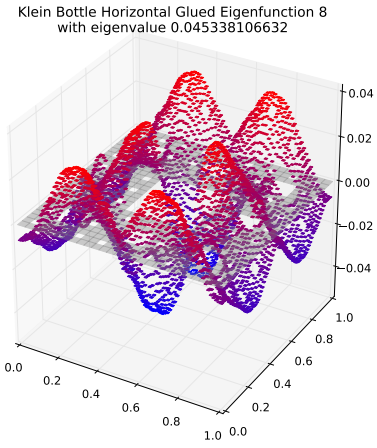


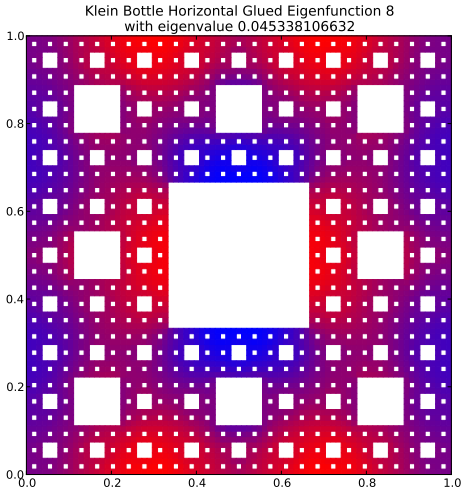


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.157275603222$
Dot Value: 0.0008622724624689493

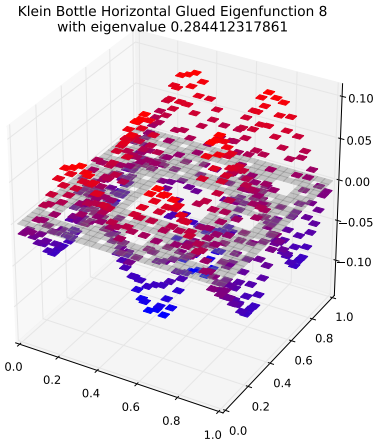
9 $M = 4$ Eigenfunction 8

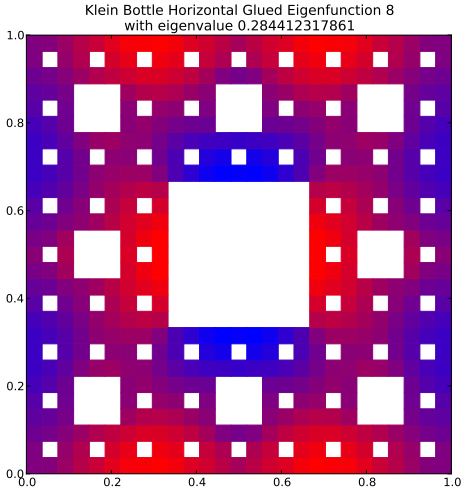
$M = 4$ Eigenfunction 8 has eigenvalue 0.045338106632





Compare to $m = 3$ eigenspace with eigenvalue 0.284412317861

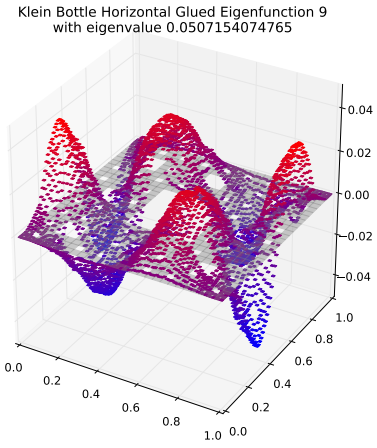


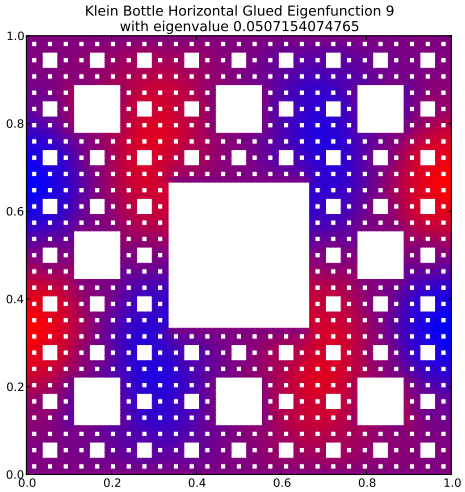


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.159409785669$
Dot Value: 0.0017002657998066 44

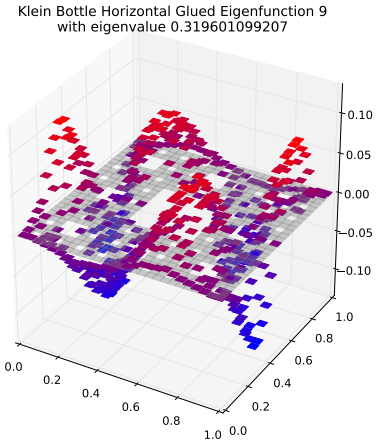
10 $M = 4$ Eigenfunction 9

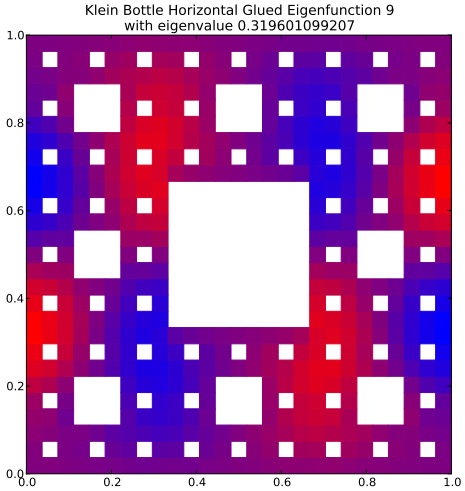
$M = 4$ Eigenfunction 9 has eigenvalue 0.0507154074765





Compare to $m = 3$ eigenspace with eigenvalue 0.319601099207

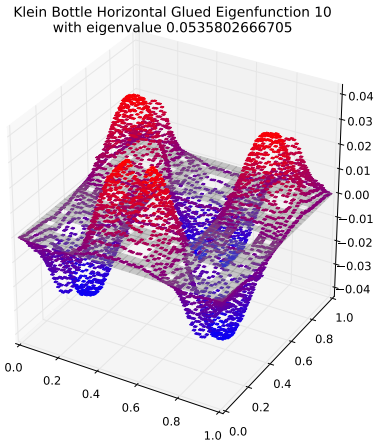


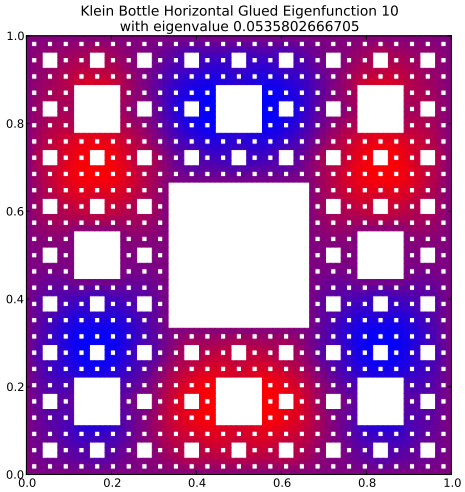


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.158683457605$
Dot Value: 0.0023819748005334818

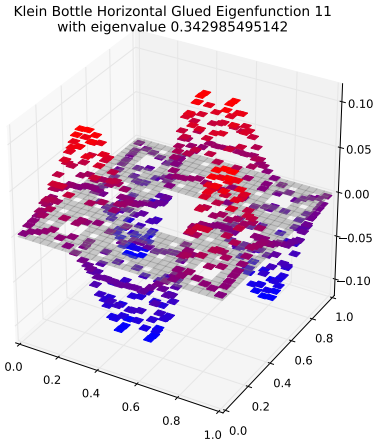
11 $M = 4$ Eigenfunction 10

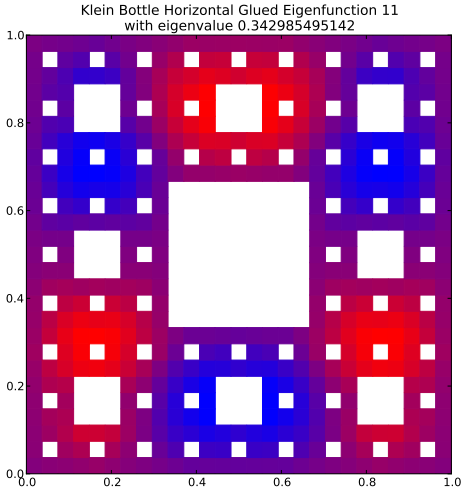
$M = 4$ Eigenfunction 10 has eigenvalue 0.0535802666705





Compare to $m = 3$ eigenspace with eigenvalue 0.342985495142

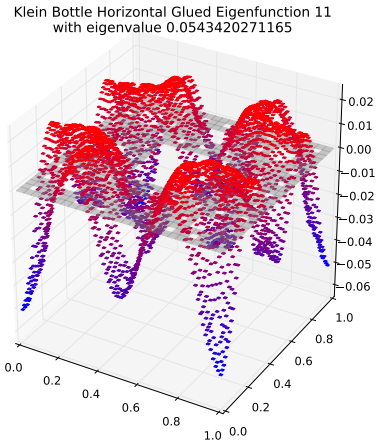


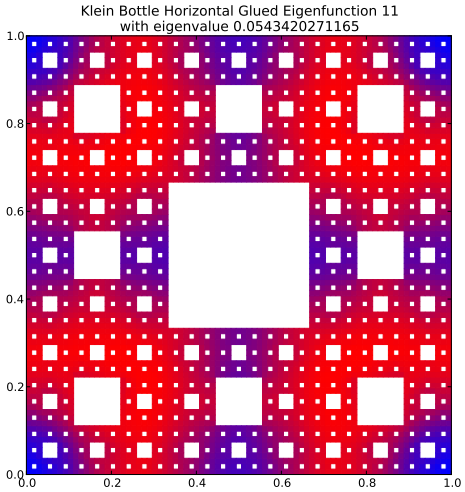


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.156217296153$
Dot Value: 0.000464626998373352

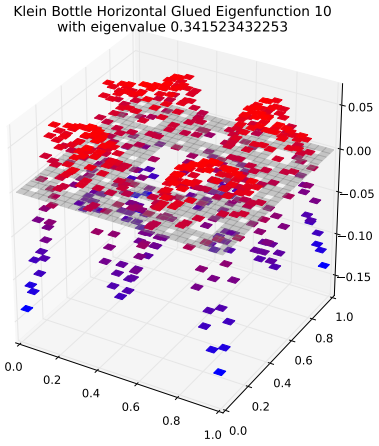
12 $M = 4$ Eigenfunction 11

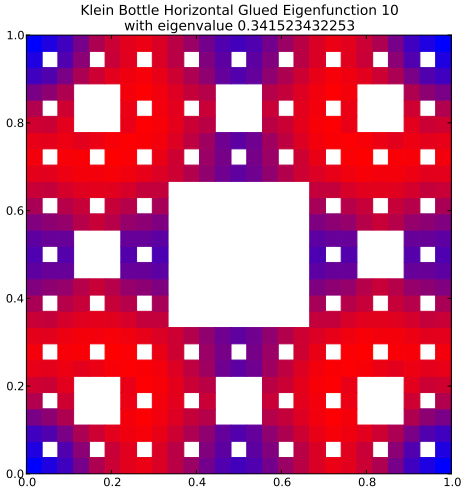
$M = 4$ Eigenfunction 11 has eigenvalue 0.0543420271165





Compare to $m = 3$ eigenspace with eigenvalue 0.341523432253

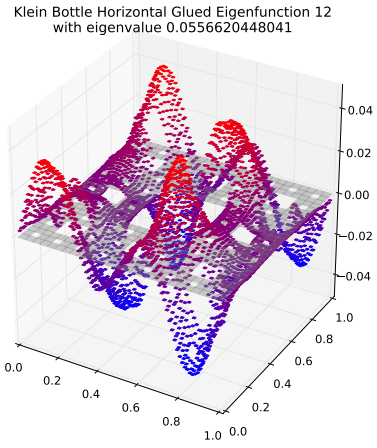


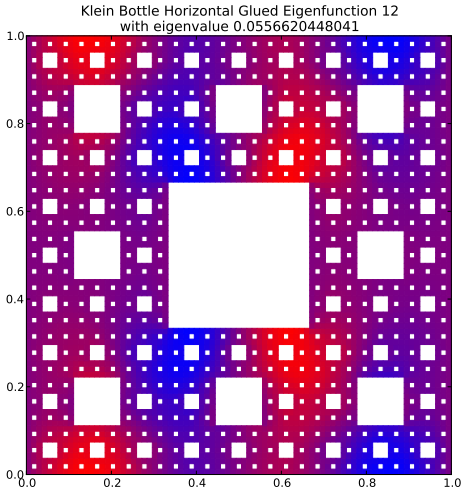


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.159116540725$
Dot Value: 0.0017043862878718397

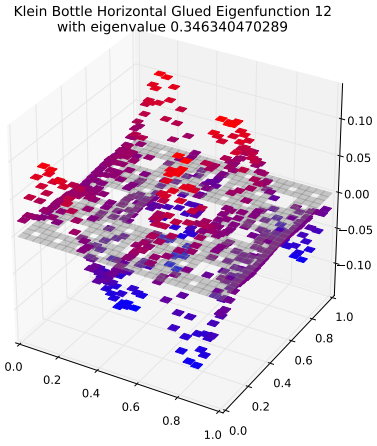
13 $M = 4$ Eigenfunction 12

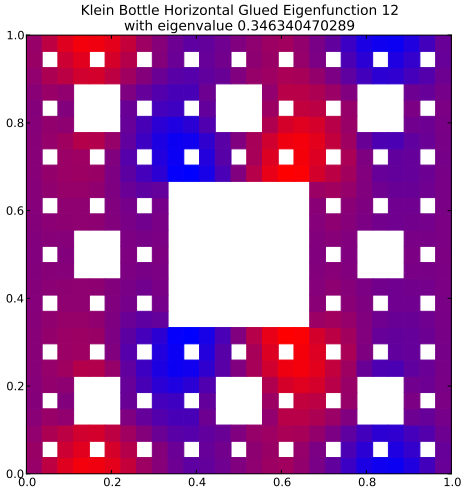
$M = 4$ Eigenfunction 12 has eigenvalue 0.0556620448041





Compare to $m = 3$ eigenspace with eigenvalue 0.346340470289

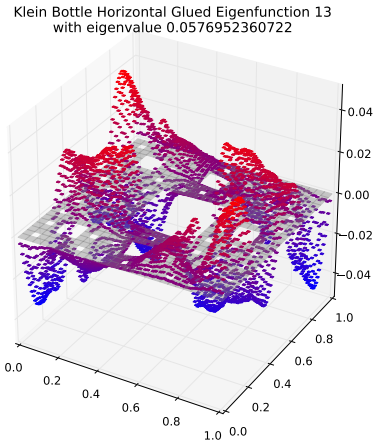


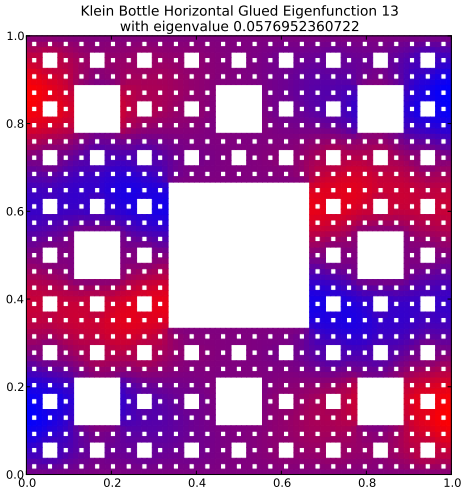


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.160714815562$
Dot Value: 0.003928678093093274

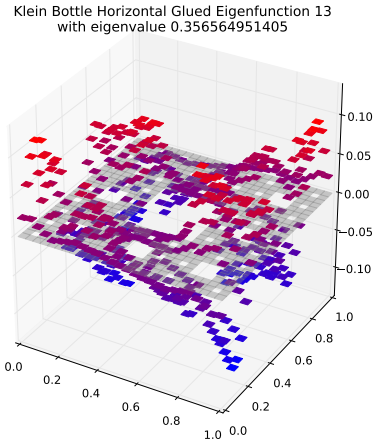
14 $M = 4$ Eigenfunction 13

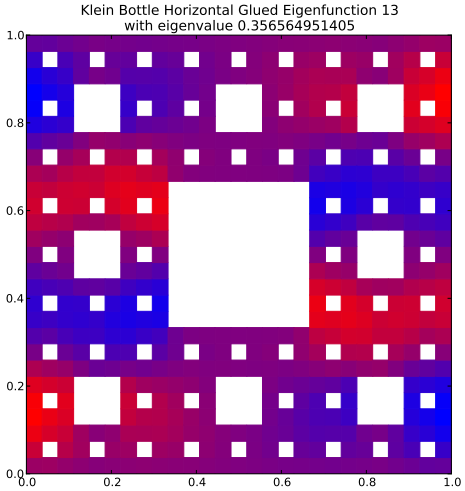
$M = 4$ Eigenfunction 13 has eigenvalue 0.0576952360722





Compare to $m = 3$ eigenspace with eigenvalue 0.356564951405

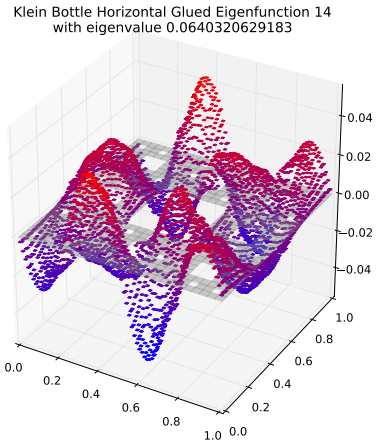


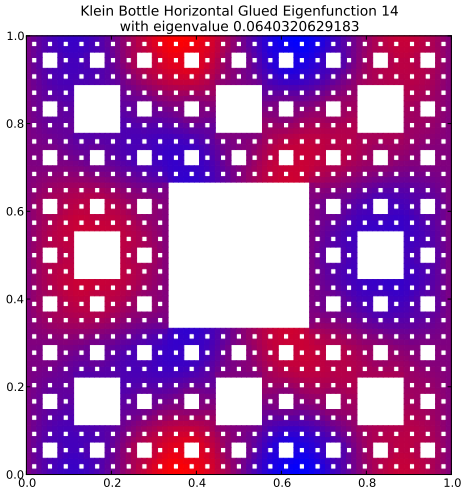


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.161808489154$
Dot Value: 0.0024871251797760063

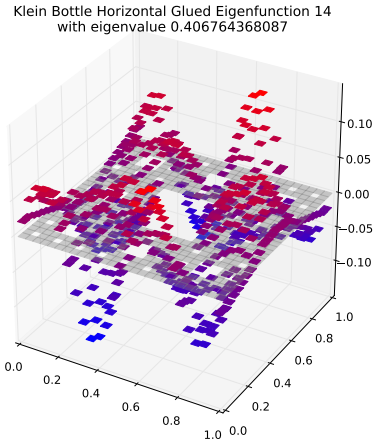
15 $M = 4$ Eigenfunction 14

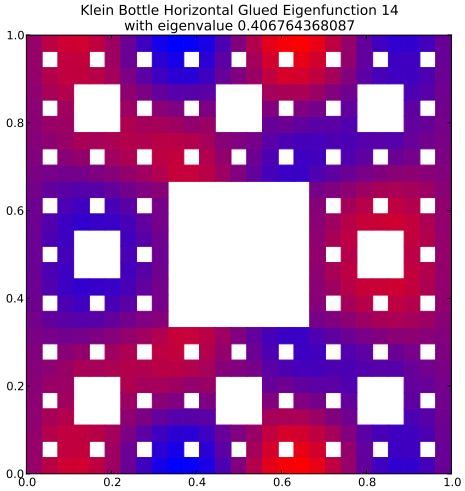
$M = 4$ Eigenfunction 14 has eigenvalue 0.0640320629183





Compare to $m = 3$ eigenspace with eigenvalue 0.406764368087

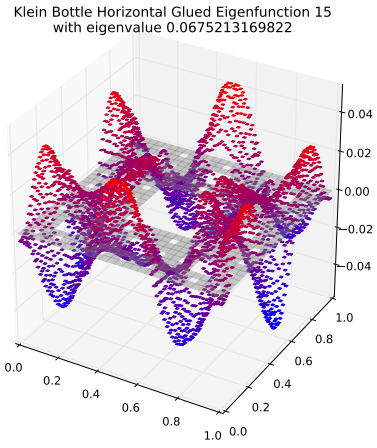


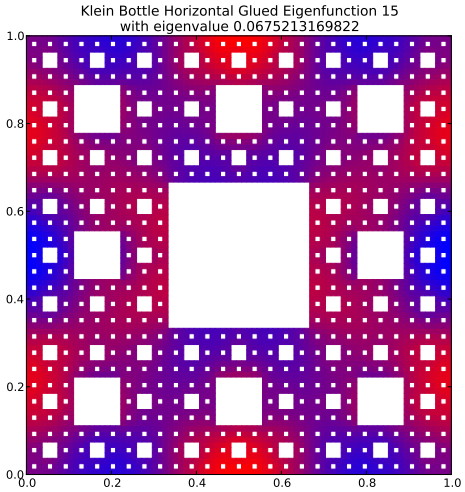


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.157418072825$
Dot Value: 0.004067495906888818

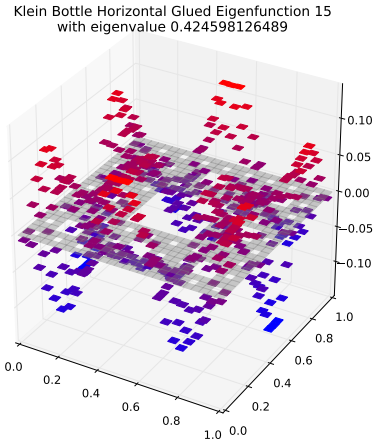
16 $M = 4$ Eigenfunction 15

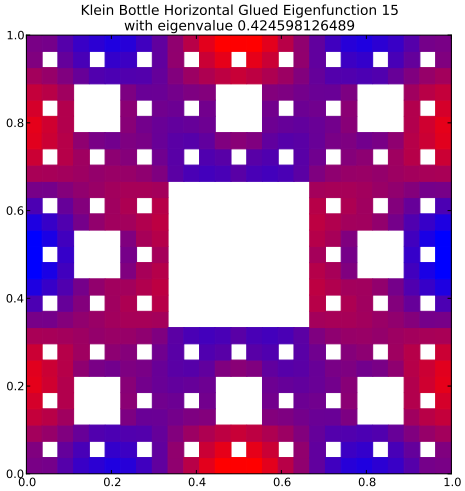
$M = 4$ Eigenfunction 15 has eigenvalue 0.0675213169822





Compare to $m = 3$ eigenspace with eigenvalue 0.424598126489

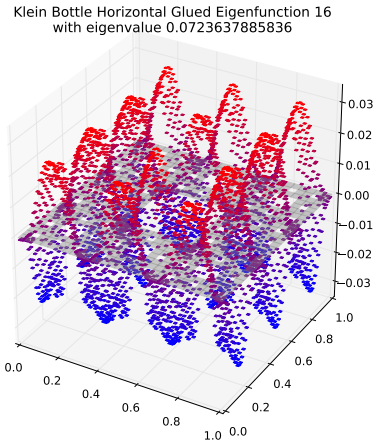


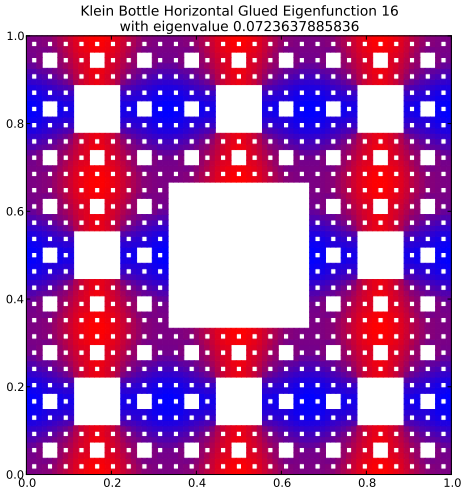


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.159024057738$
Dot Value: 0.0007076367288443297

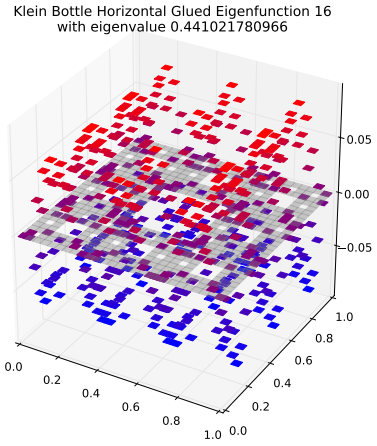
17 $M = 4$ Eigenfunction 16

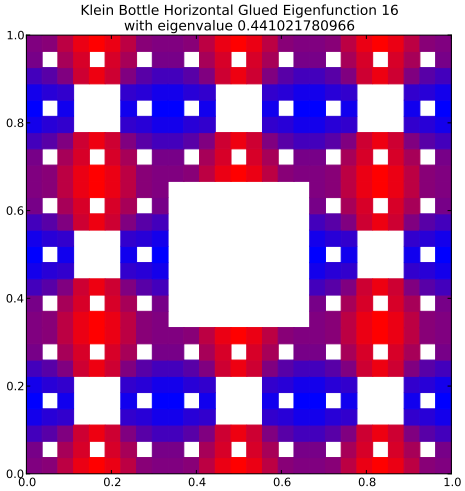
$M = 4$ Eigenfunction 16 has eigenvalue 0.0723637885836





Compare to $m = 3$ eigenspace with eigenvalue 0.441021780966

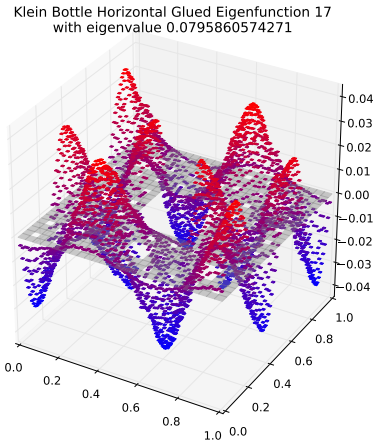


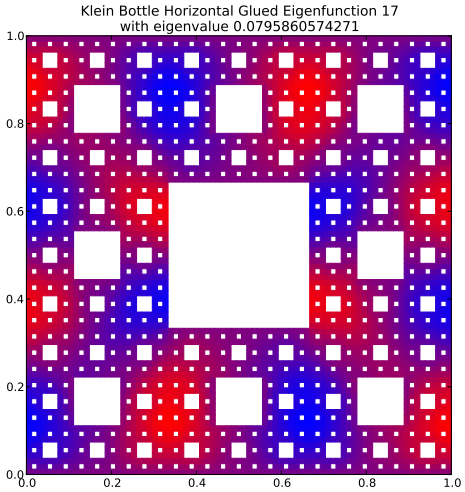


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.164082119539$
Dot Value: 0.0004106827796729329

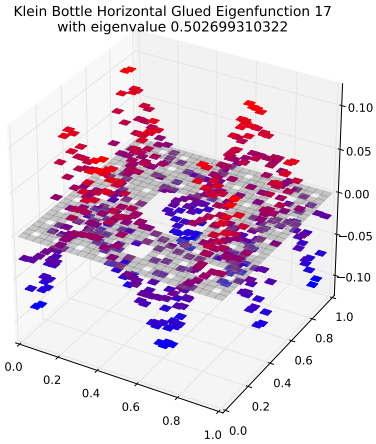
18 $M = 4$ Eigenfunction 17

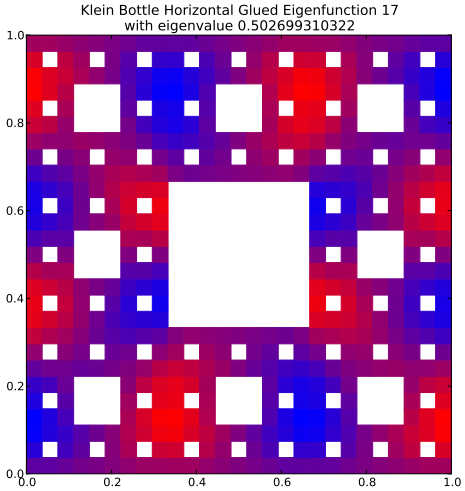
$M = 4$ Eigenfunction 17 has eigenvalue 0.0795860574271





Compare to $m = 3$ eigenspace with eigenvalue 0.502699310322

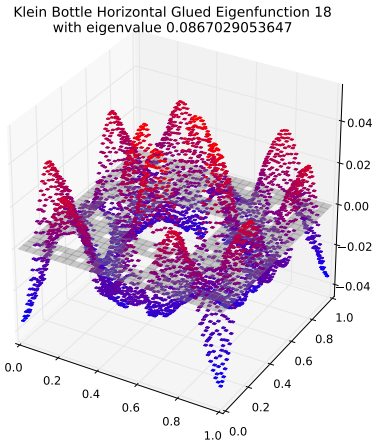


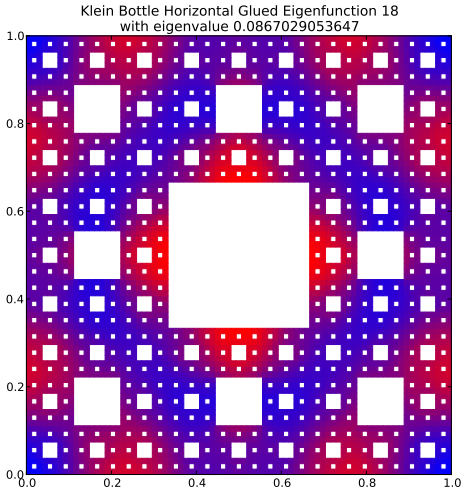


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.158317419167$
Dot Value: 0.0010755753527892375

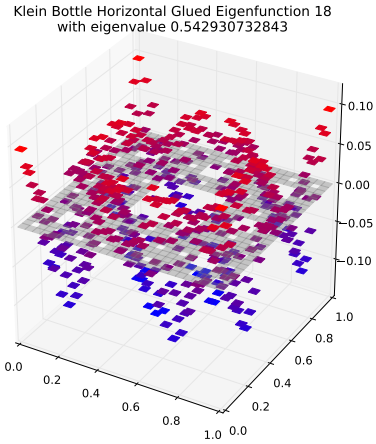
19 $M = 4$ Eigenfunction 18

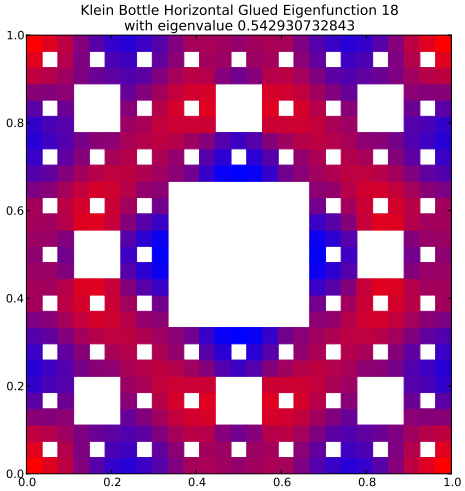
$M = 4$ Eigenfunction 18 has eigenvalue 0.0867029053647





Compare to $m = 3$ eigenspace with eigenvalue 0.542930732843

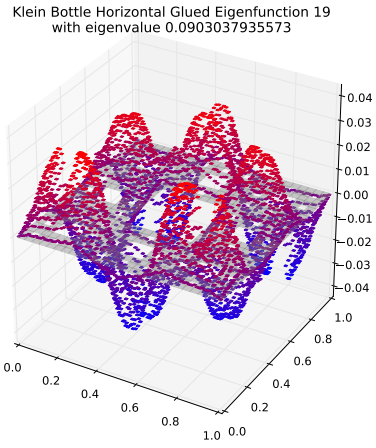


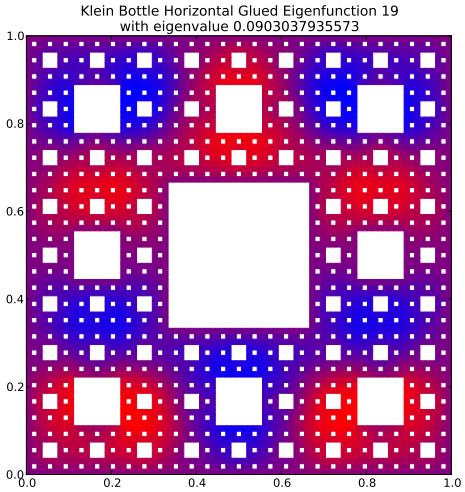


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.159694230074$
Dot Value: 0.0022856184229569365

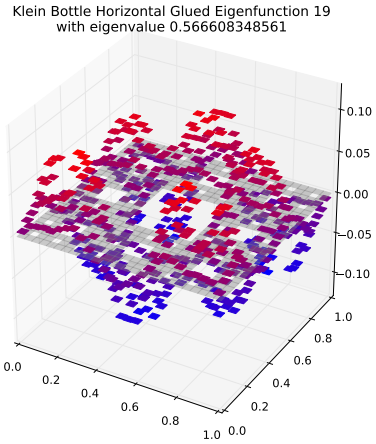
20 $M = 4$ Eigenfunction 19

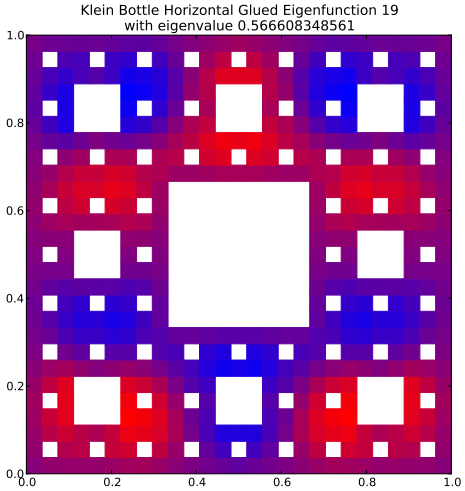
$M = 4$ Eigenfunction 19 has eigenvalue 0.0903037935573





Compare to $m = 3$ eigenspace with eigenvalue 0.566608348561

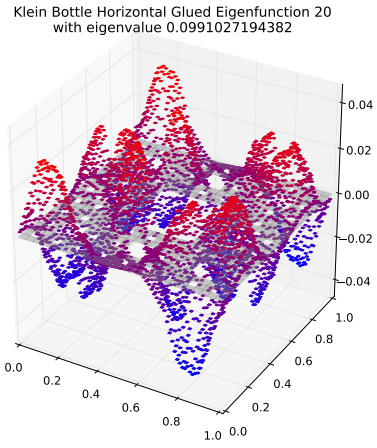


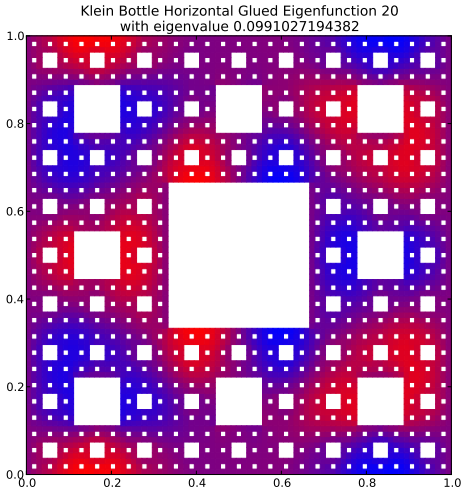


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.159376037763$
Dot Value: 0.0019041747834227518

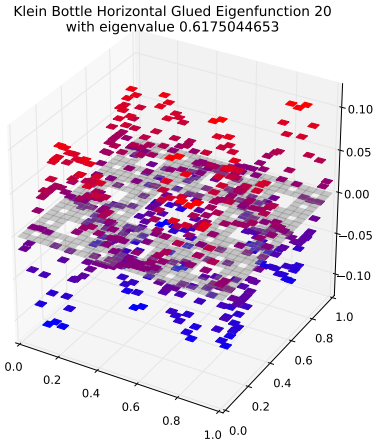
21 $M = 4$ Eigenfunction 20

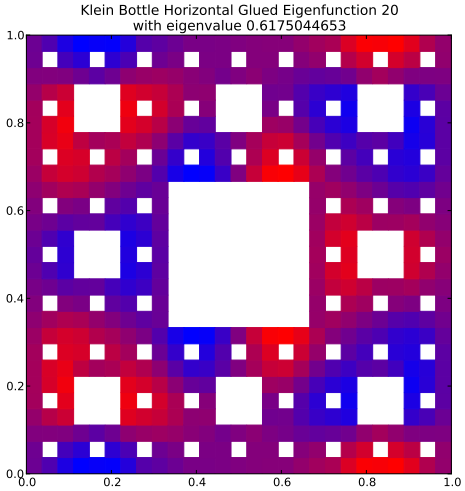
$M = 4$ Eigenfunction 20 has eigenvalue 0.0991027194382





Compare to $m = 3$ eigenspace with eigenvalue 0.6175044653

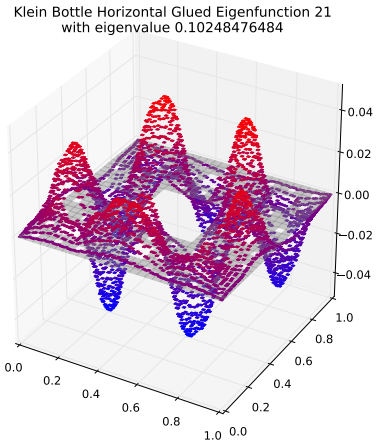


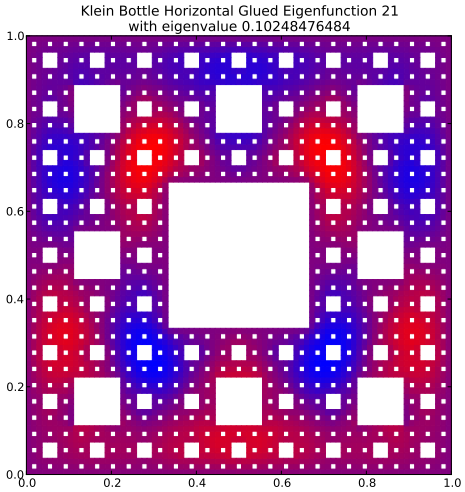


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.160489073371$
Dot Value: 0.0045254786557844 54

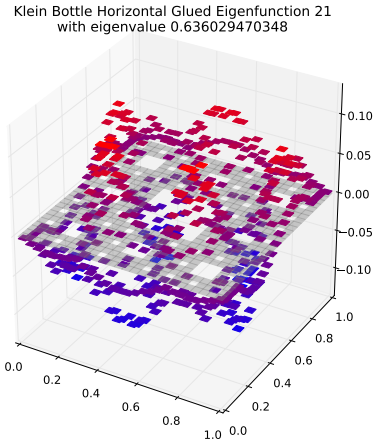
22 $M = 4$ Eigenfunction 21

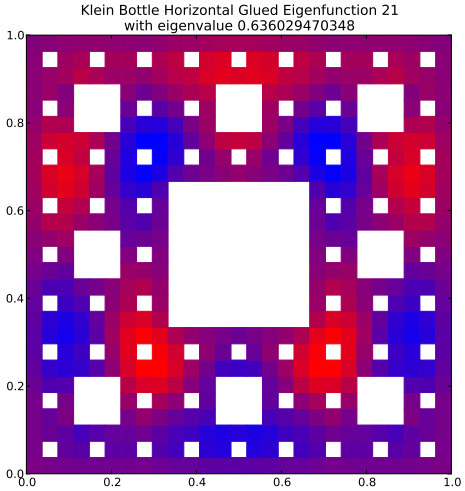
$M = 4$ Eigenfunction 21 has eigenvalue 0.10248476484





Compare to $m = 3$ eigenspace with eigenvalue 0.636029470348

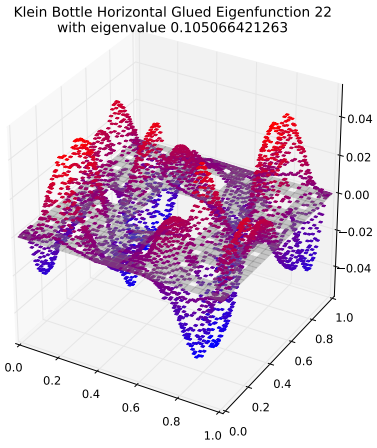


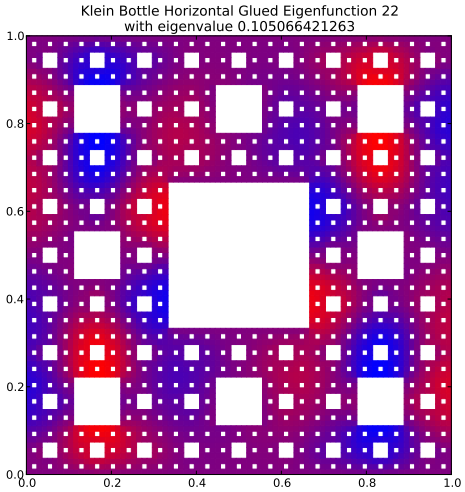


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.161132100977$
Dot Value: 0.0022047033341557887

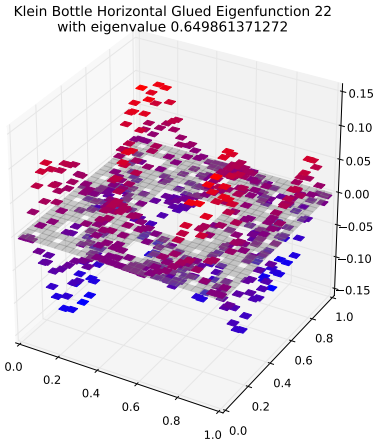
23 $M = 4$ Eigenfunction 22

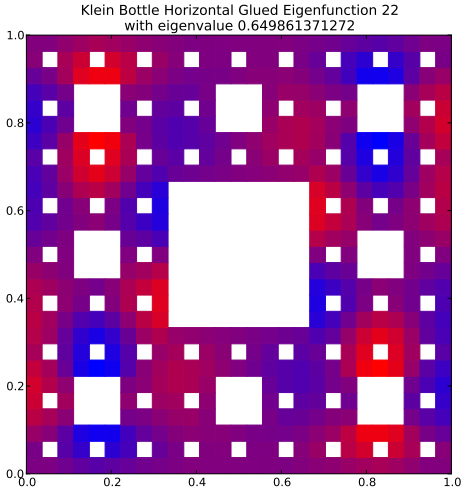
$M = 4$ Eigenfunction 22 has eigenvalue 0.105066421263





Compare to $m = 3$ eigenspace with eigenvalue 0.649861371272

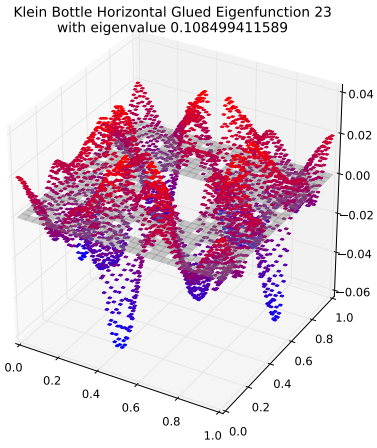


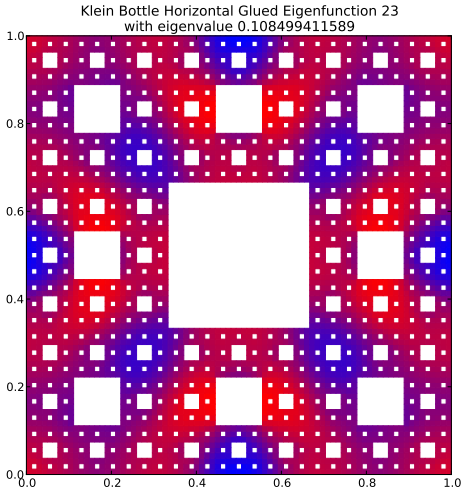


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.161675129355$
Dot Value: 0.0015115061013941666

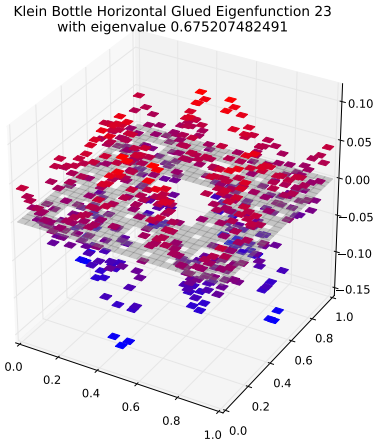
24 $M = 4$ Eigenfunction 23

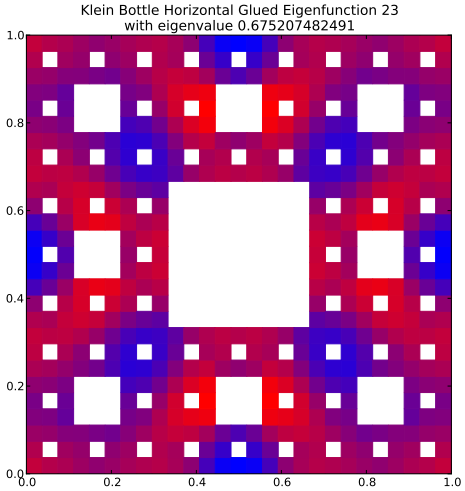
$M = 4$ Eigenfunction 23 has eigenvalue 0.108499411589





Compare to $m = 3$ eigenspace with eigenvalue 0.675207482491

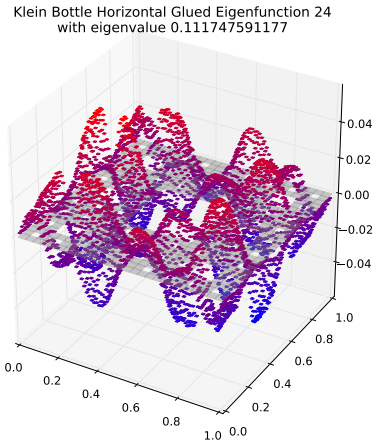


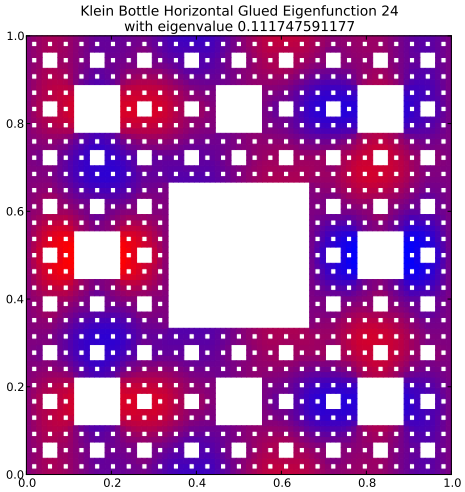


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.160690475746$
Dot Value: 0.005945105990269206

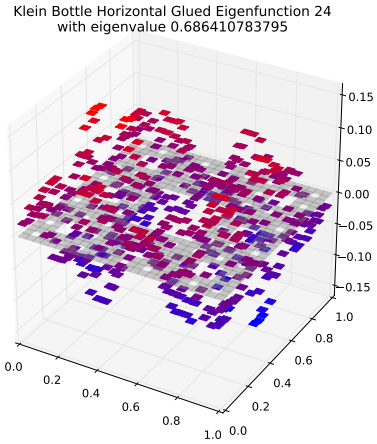
25 $M = 4$ Eigenfunction 24

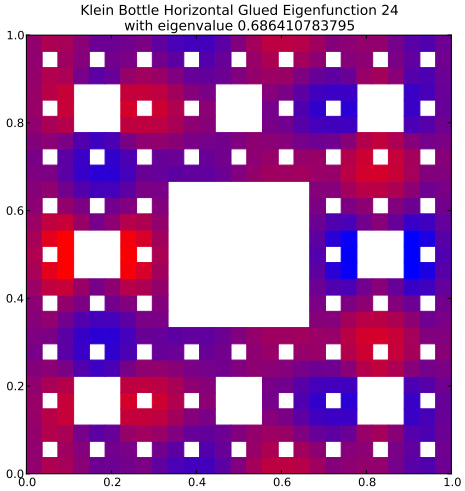
$M = 4$ Eigenfunction 24 has eigenvalue 0.111747591177





Compare to $m = 3$ eigenspace with eigenvalue 0.686410783795

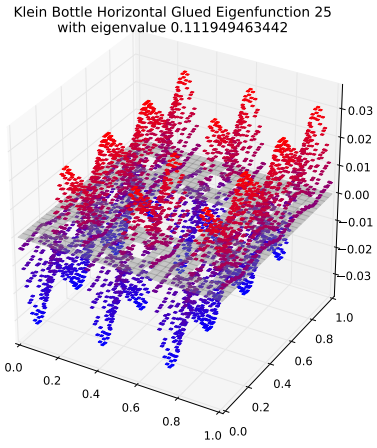


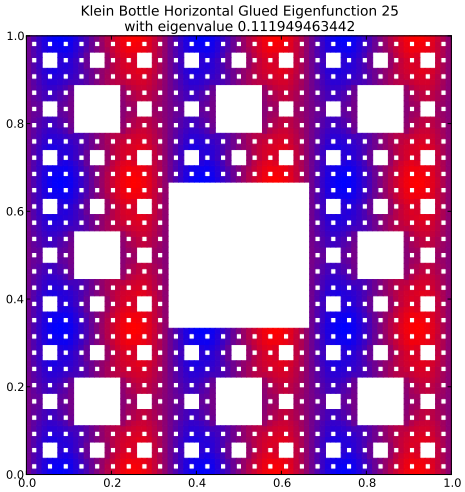


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.162799877006$
Dot Value: 0.004929388134777168

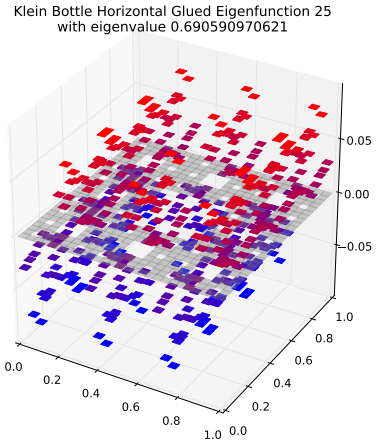
26 $M = 4$ Eigenfunction 25

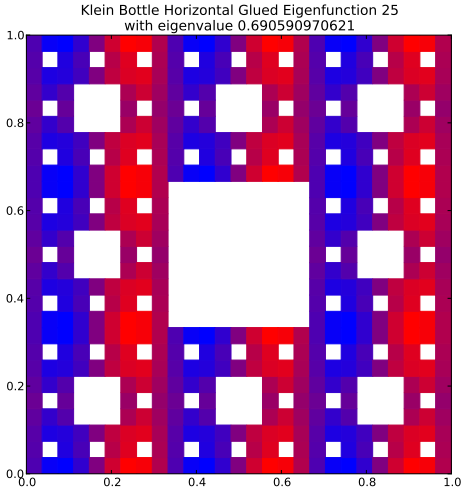
$M = 4$ Eigenfunction 25 has eigenvalue 0.111949463442





Compare to $m = 3$ eigenspace with eigenvalue 0.690590970621

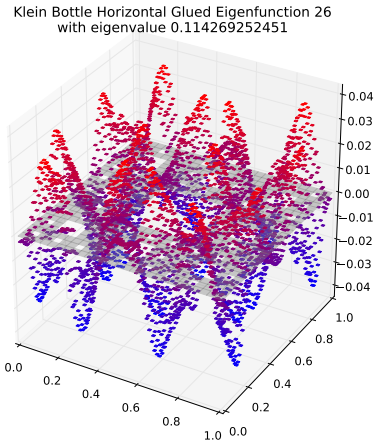


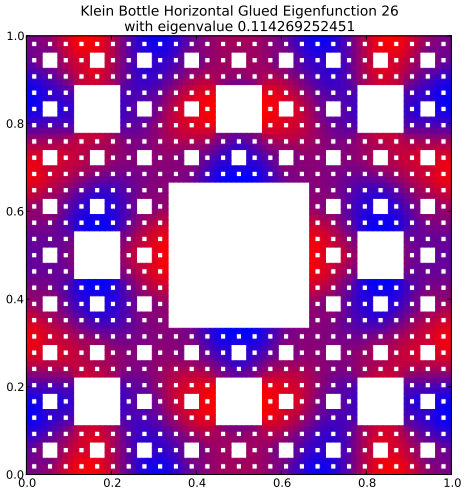


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.162106758131$
Dot Value: 0.0008467422239331057

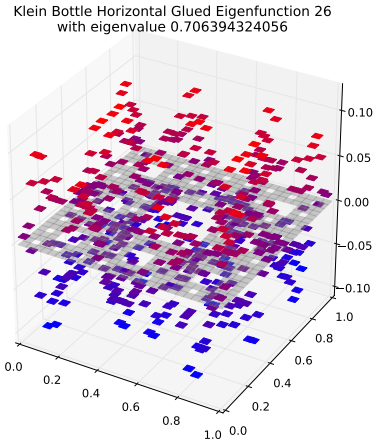
27 $M = 4$ Eigenfunction 26

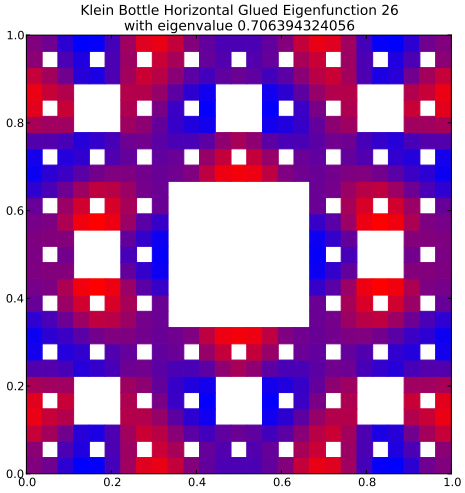
$M = 4$ Eigenfunction 26 has eigenvalue 0.114269252451





Compare to $m = 3$ eigenspace with eigenvalue 0.706394324056

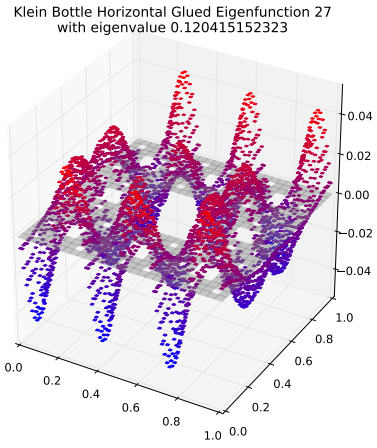


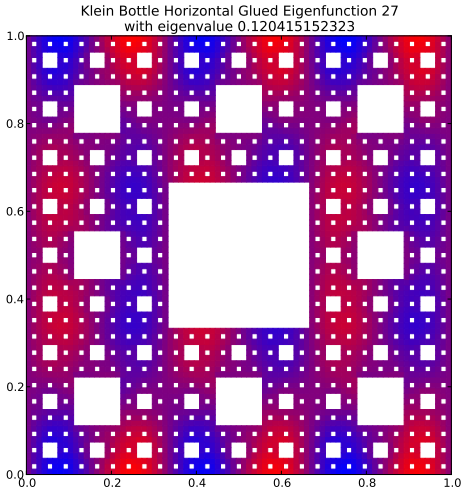


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.161764114688$
Dot Value: 0.005764901677737244

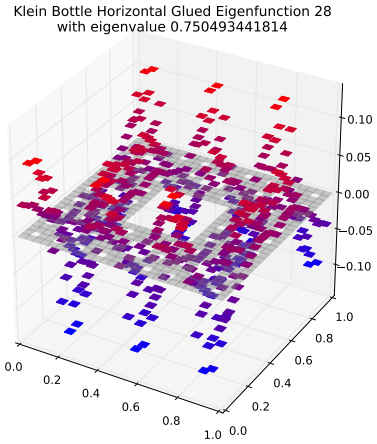
28 $M = 4$ Eigenfunction 27

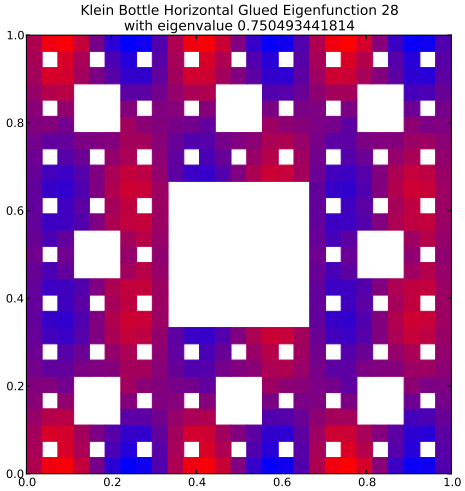
$M = 4$ Eigenfunction 27 has eigenvalue 0.120415152323





Compare to $m = 3$ eigenspace with eigenvalue 0.750493441814

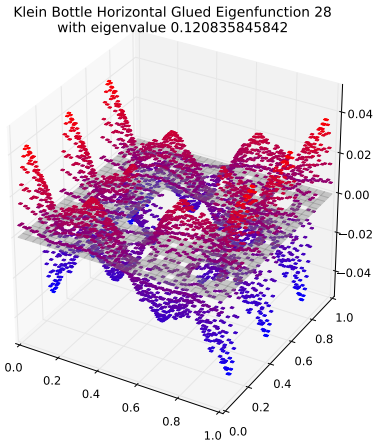


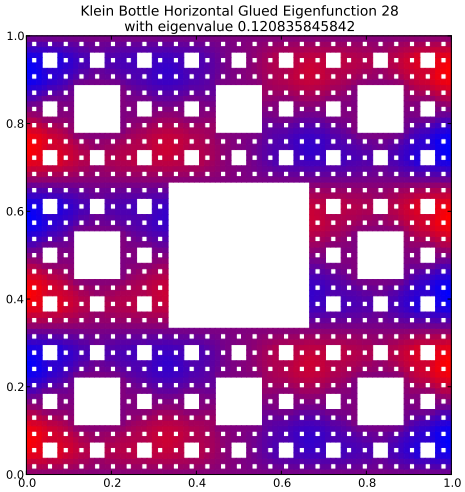


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.160447974111$
Dot Value: 0.0011913367156922705

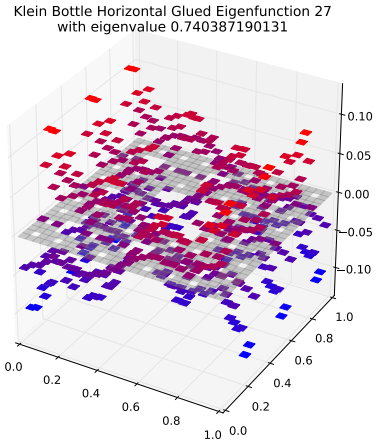
29 $M = 4$ Eigenfunction 28

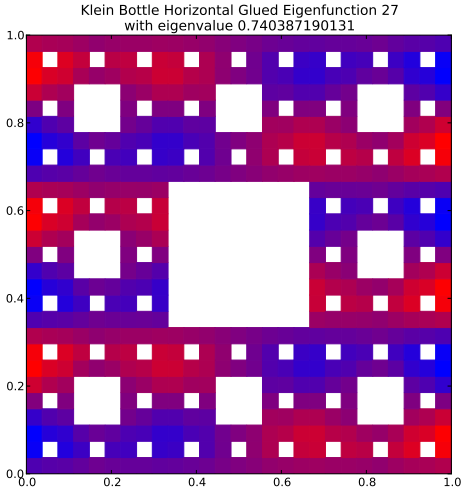
$M = 4$ Eigenfunction 28 has eigenvalue 0.120835845842





Compare to $m = 3$ eigenspace with eigenvalue 0.740387190131

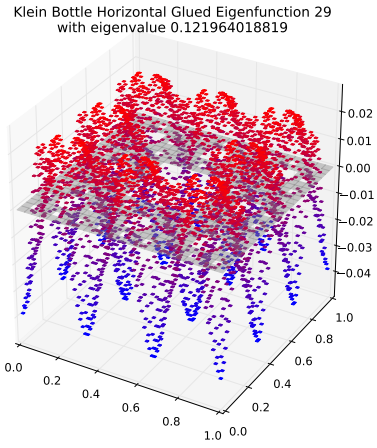


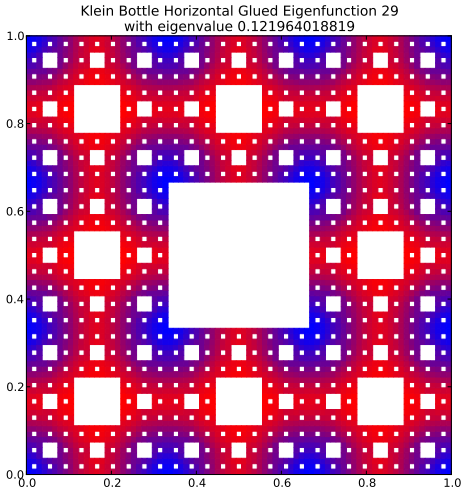


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.163206289159$
Dot Value: 0.0010644732293489945

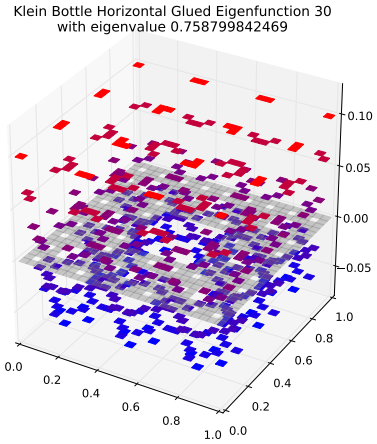
30 $M = 4$ Eigenfunction 29

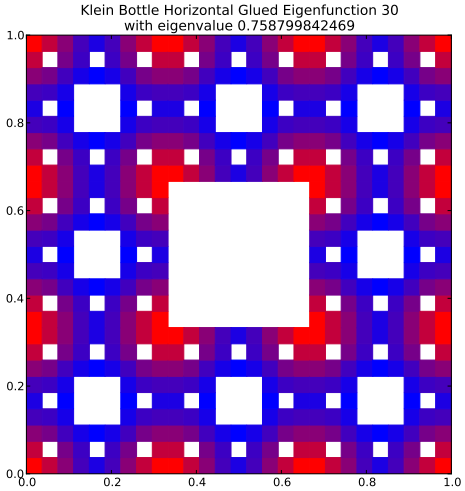
$M = 4$ Eigenfunction 29 has eigenvalue 0.121964018819





Compare to $m = 3$ eigenspace with eigenvalue 0.758799842469

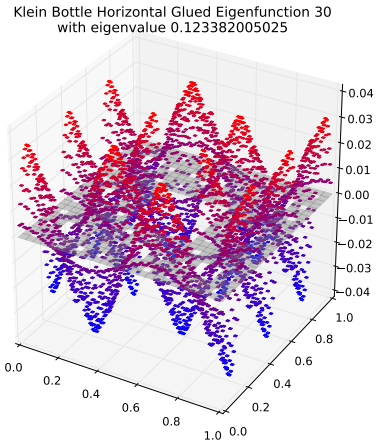


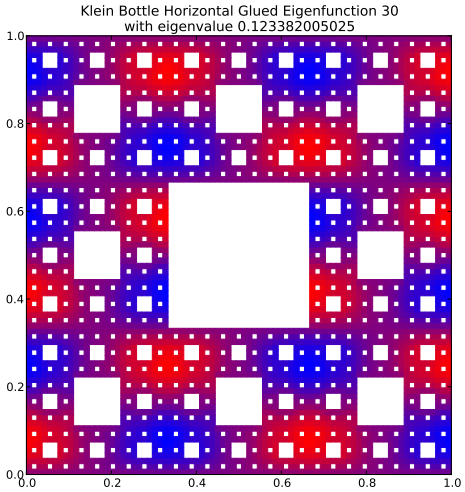


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.160732794069$
Dot Value: 0.0012136904306052632

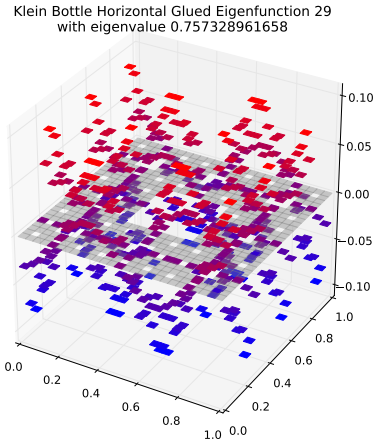
31 $M = 4$ Eigenfunction 30

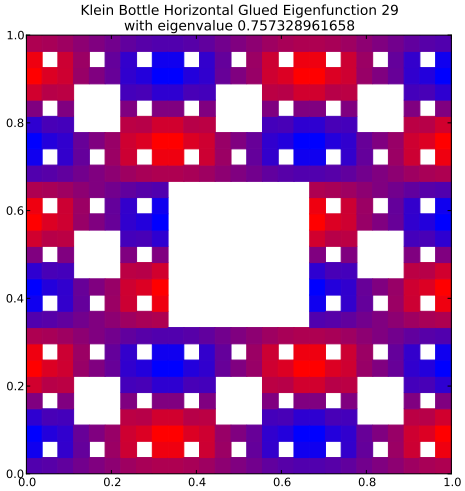
$M = 4$ Eigenfunction 30 has eigenvalue 0.123382005025





Compare to $m = 3$ eigenspace with eigenvalue 0.757328961658

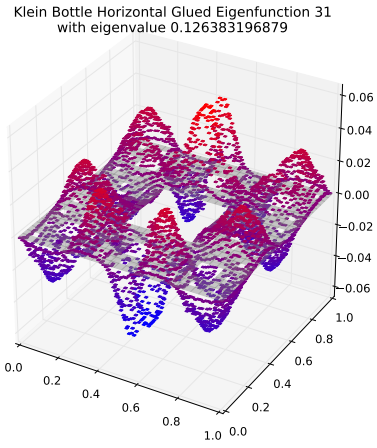


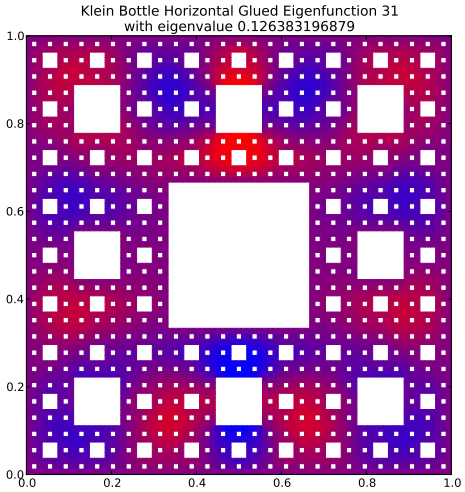


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.162917320308$
Dot Value: 0.0016954958601624 88

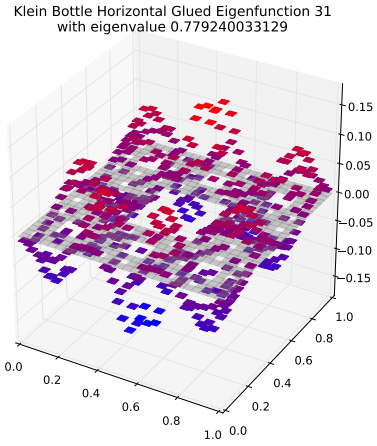
32 $M = 4$ Eigenfunction 31

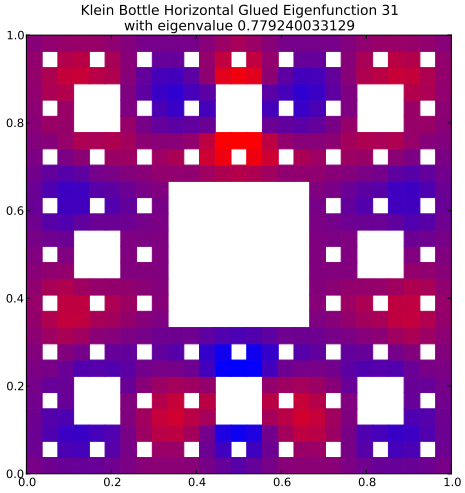
$M = 4$ Eigenfunction 31 has eigenvalue 0.126383196879





Compare to $m = 3$ eigenspace with eigenvalue 0.779240033129

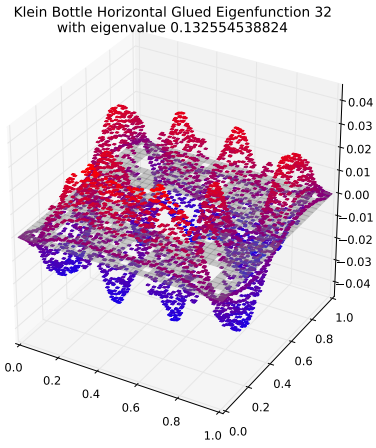


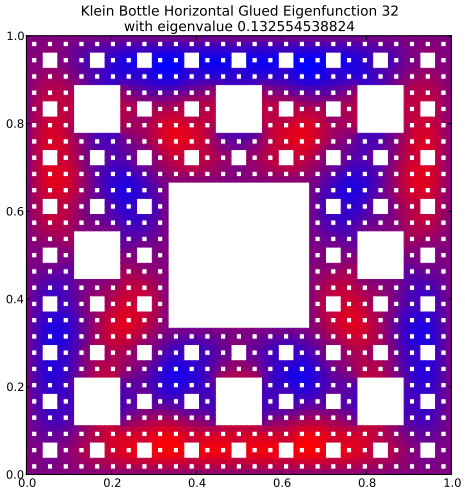


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.162187761801$
Dot Value: 0.004824799928345169

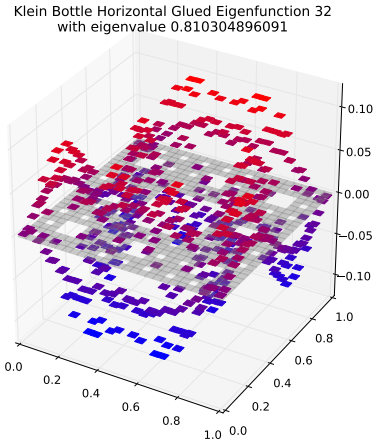
33 $M = 4$ Eigenfunction 32

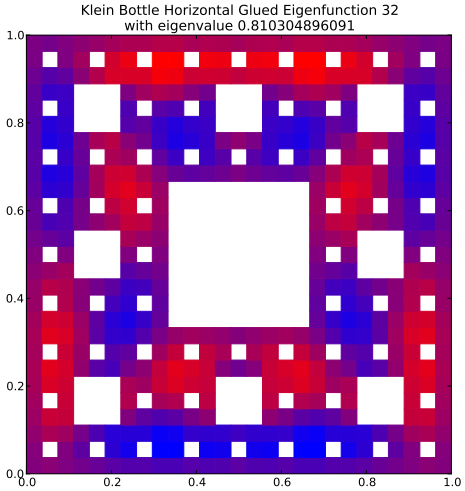
$M = 4$ Eigenfunction 32 has eigenvalue 0.132554538824





Compare to $m = 3$ eigenspace with eigenvalue 0.810304896091

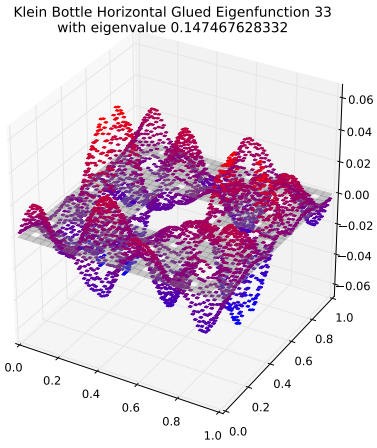


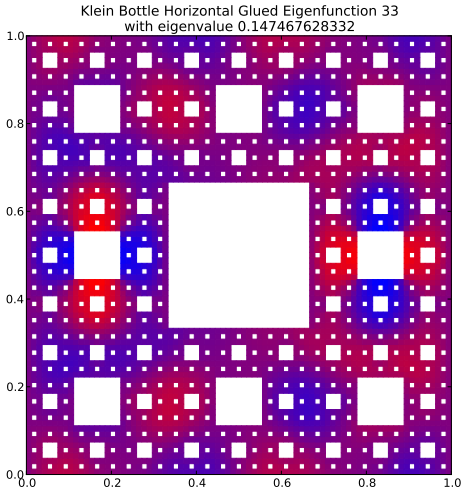


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.163586002581$
Dot Value: 0.004689681151532787

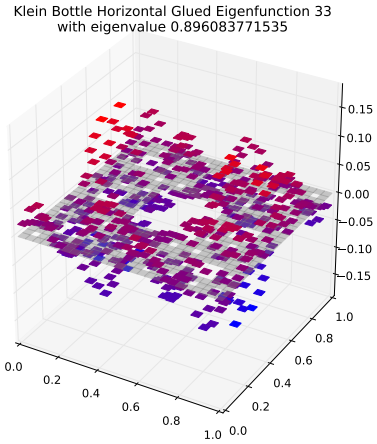
34 $M = 4$ Eigenfunction 33

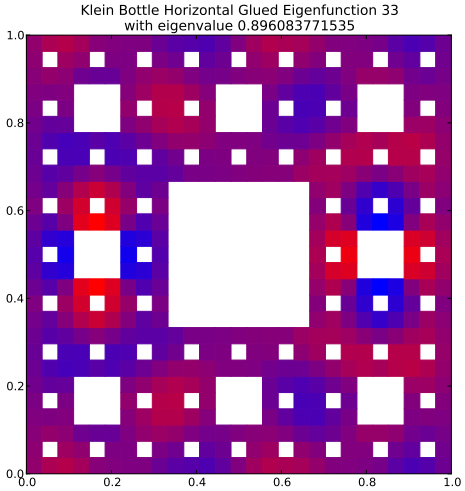
$M = 4$ Eigenfunction 33 has eigenvalue 0.147467628332





Compare to $m = 3$ eigenspace with eigenvalue 0.896083771535

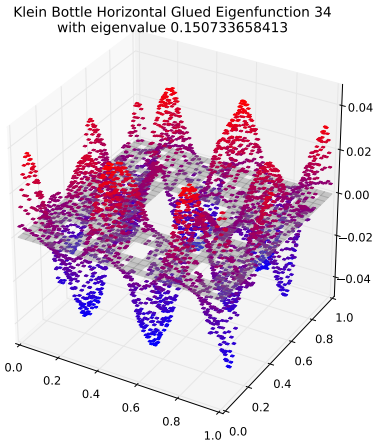


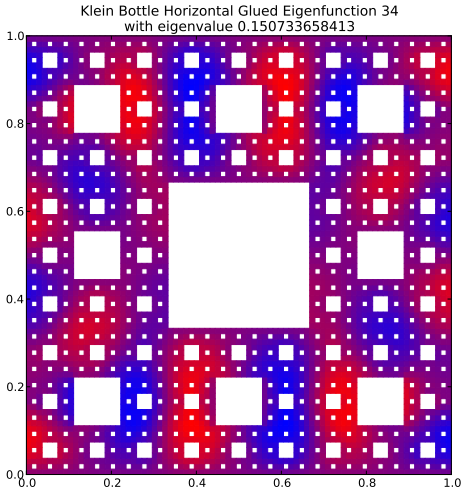


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.164569020237$
Dot Value: 0.0054907699038213575

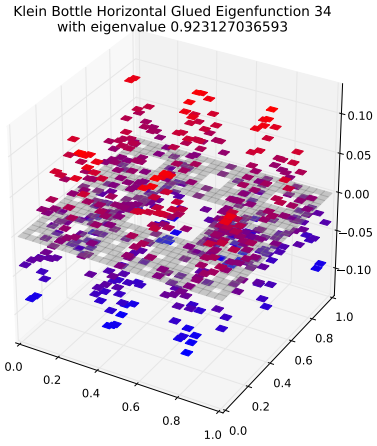
35 $M = 4$ Eigenfunction 34

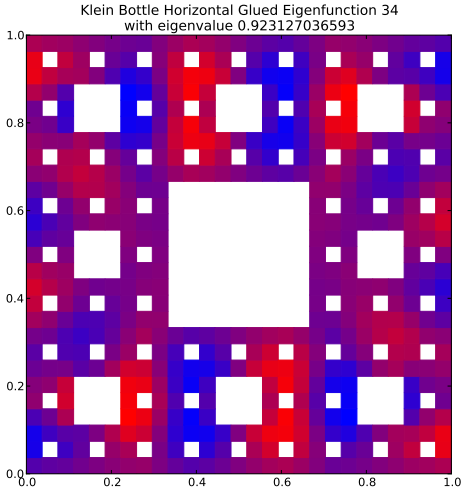
$M = 4$ Eigenfunction 34 has eigenvalue 0.150733658413





Compare to $m = 3$ eigenspace with eigenvalue 0.923127036593

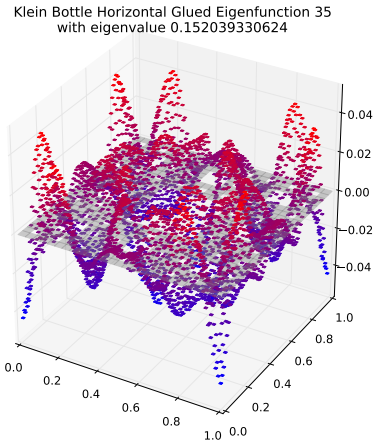


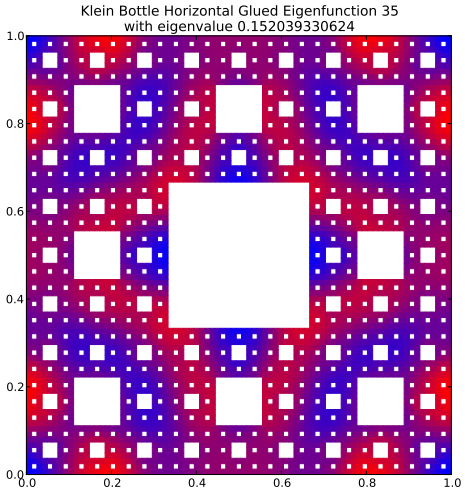


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.163285931879$
Dot Value: 0.01846105074385007

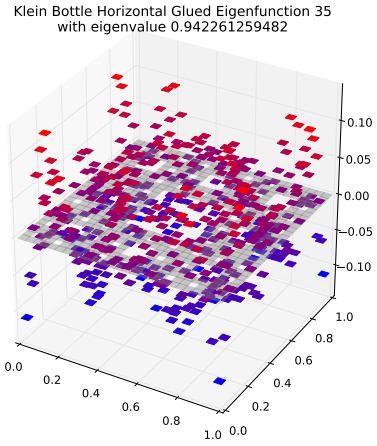
36 $M = 4$ Eigenfunction 35

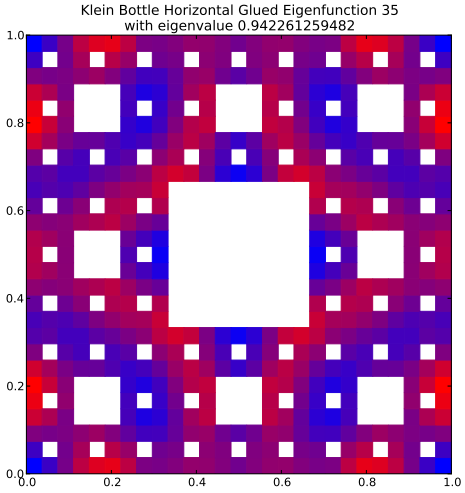
$M = 4$ Eigenfunction 35 has eigenvalue 0.152039330624





Compare to $m = 3$ eigenspace with eigenvalue 0.942261259482

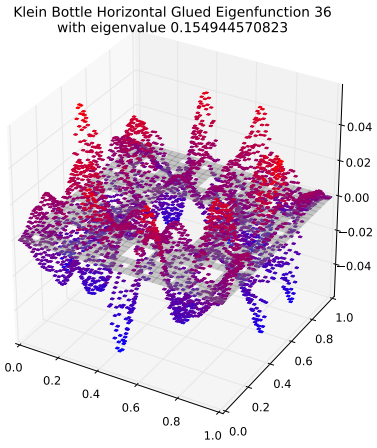


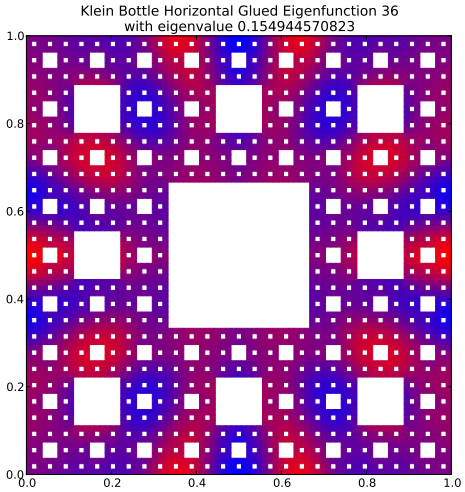


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.161355811983$
Dot Value: 0.022301452524732923

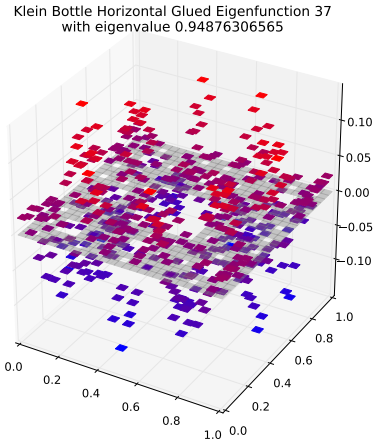
37 $M = 4$ Eigenfunction 36

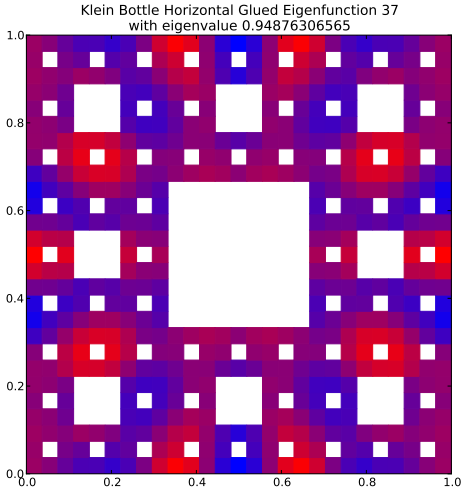
$M = 4$ Eigenfunction 36 has eigenvalue 0.154944570823





Compare to $m = 3$ eigenspace with eigenvalue 0.94876306565

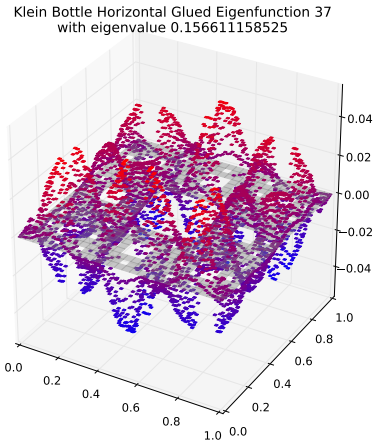


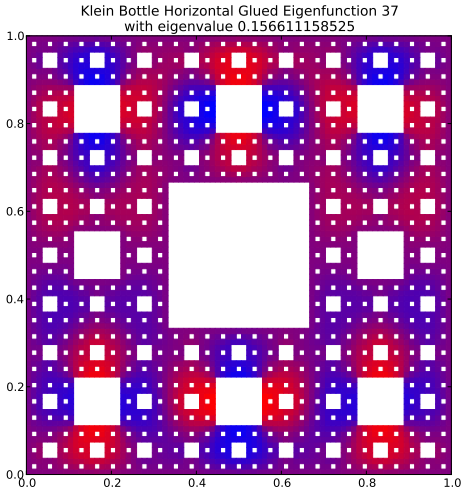


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.163312186607$
Dot Value: 0.02661647630082664

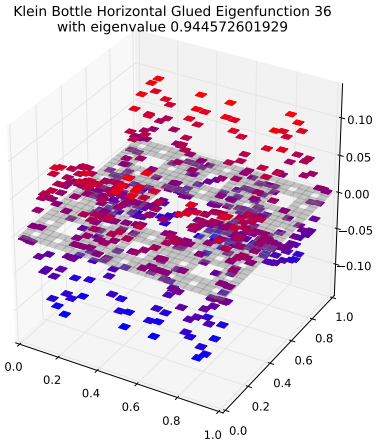
38 $M = 4$ Eigenfunction 37

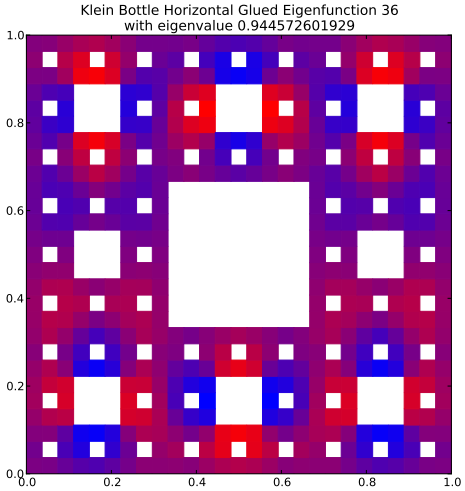
$M = 4$ Eigenfunction 37 has eigenvalue 0.156611158525





Compare to $m = 3$ eigenspace with eigenvalue 0.944572601929

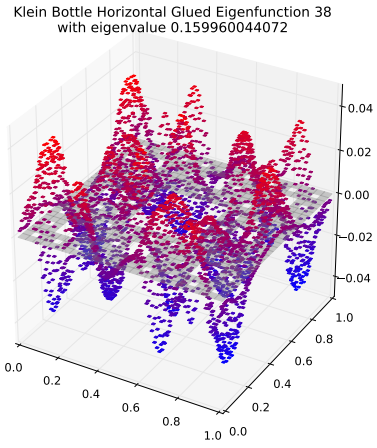


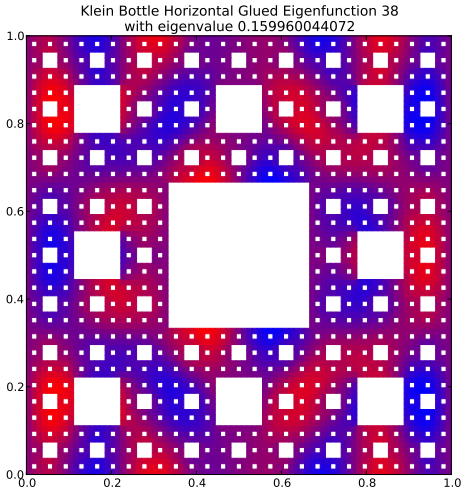


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.165801081045$
Dot Value: 0.0014450117474194002

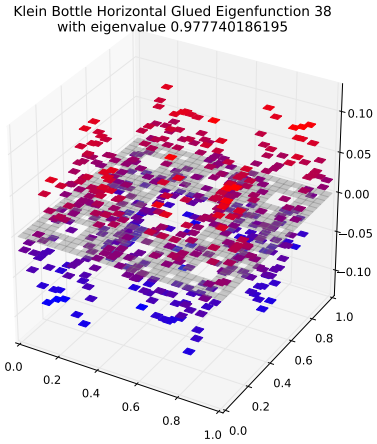
39 $M = 4$ Eigenfunction 38

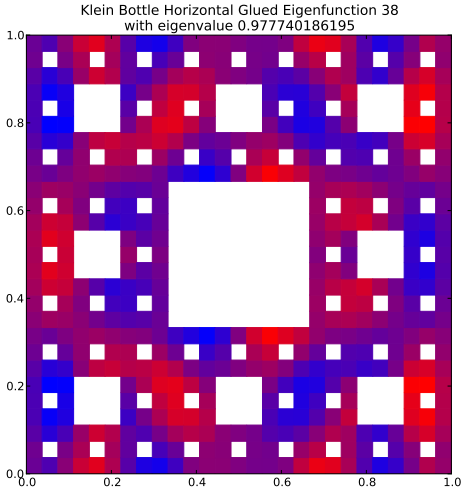
$M = 4$ Eigenfunction 38 has eigenvalue 0.159960044072





Compare to $m = 3$ eigenspace with eigenvalue 0.977740186195

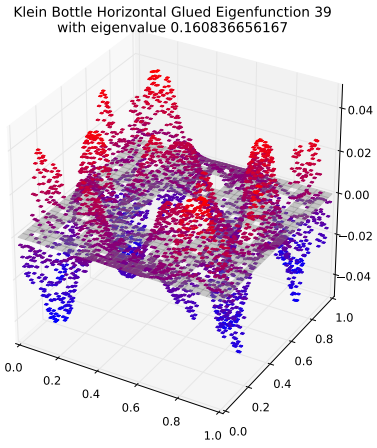


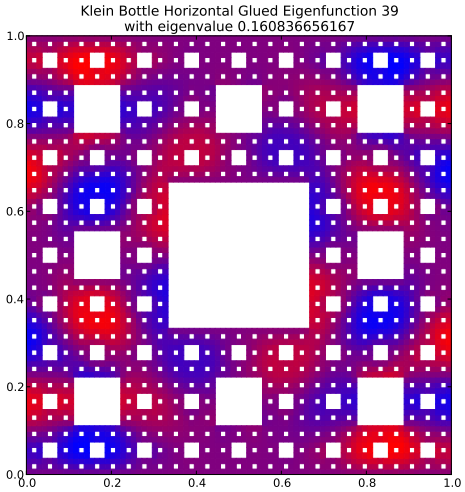


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.163601789443$
Dot Value: 0.006218068650475139

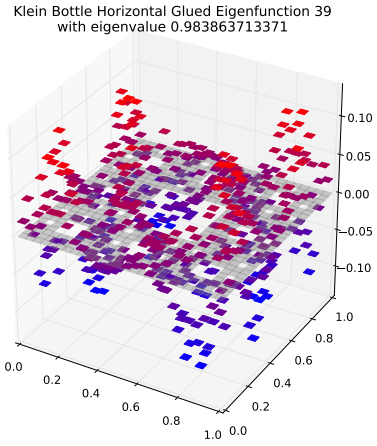
40 $M = 4$ Eigenfunction 39

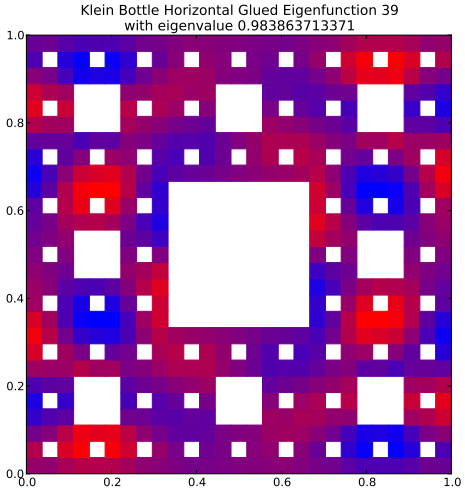
$M = 4$ Eigenfunction 39 has eigenvalue 0.160836656167





Compare to $m = 3$ eigenspace with eigenvalue 0.983863713371

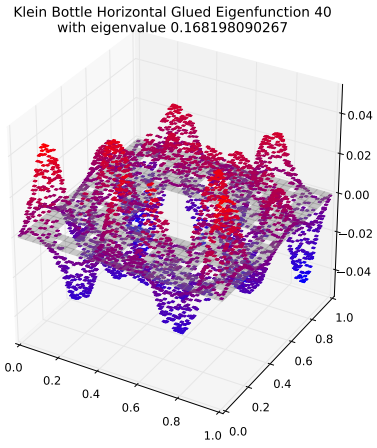


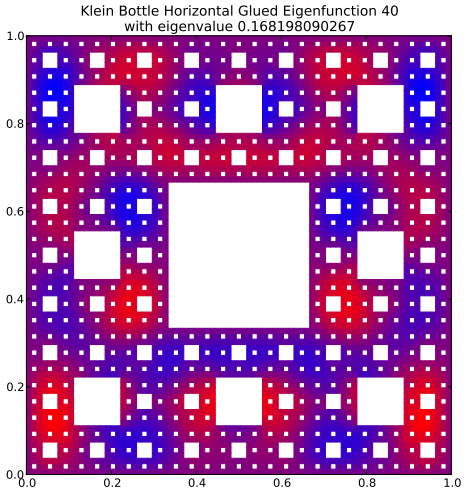


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.163474528008$
Dot Value: 0.01918908254598317

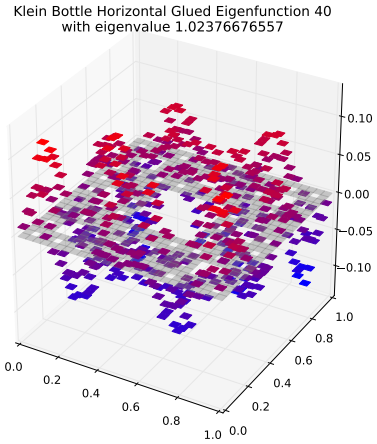
41 $M = 4$ Eigenfunction 40

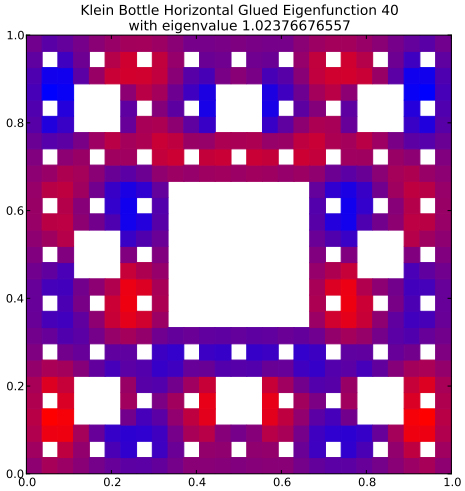
$M = 4$ Eigenfunction 40 has eigenvalue 0.168198090267





Compare to $m = 3$ eigenspace with eigenvalue 1.02376676557

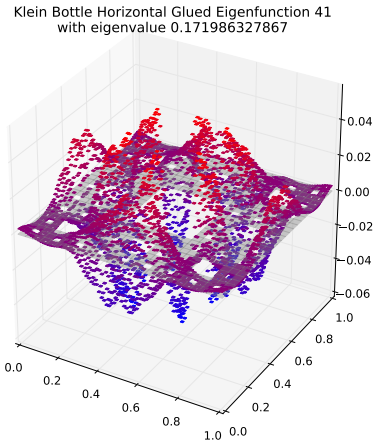


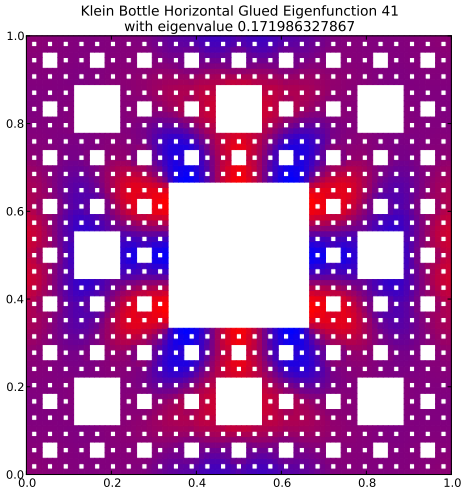


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.164293368298$
Dot Value: 0.0034527403457386l4

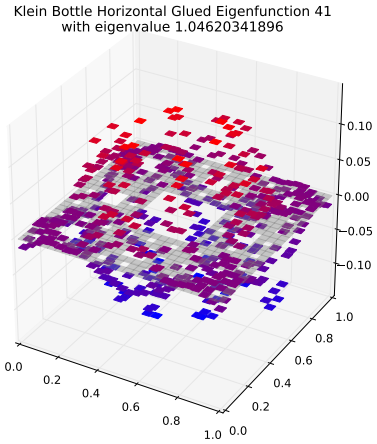
42 $M = 4$ Eigenfunction 41

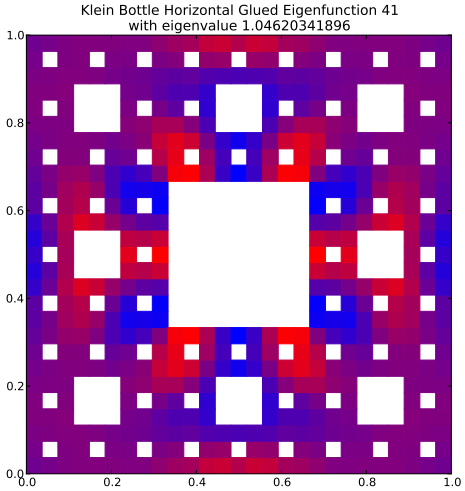
$M = 4$ Eigenfunction 41 has eigenvalue 0.171986327867





Compare to $m = 3$ eigenspace with eigenvalue 1.04620341896

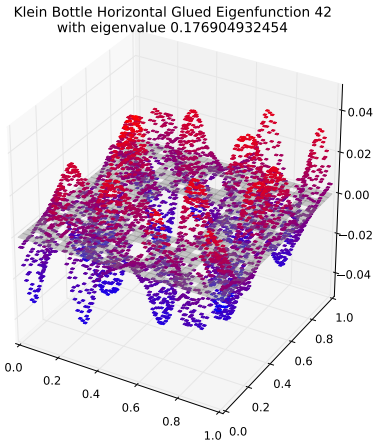


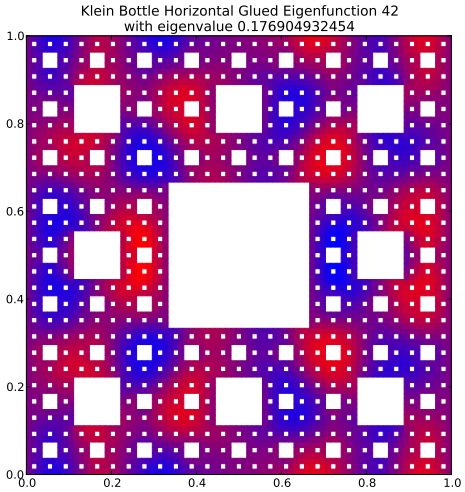


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.164390905965$
Dot Value: 0.005297132480648559

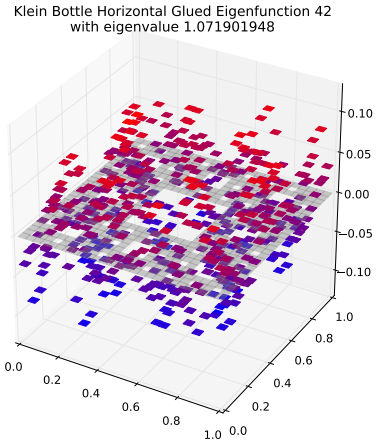
43 $M = 4$ Eigenfunction 42

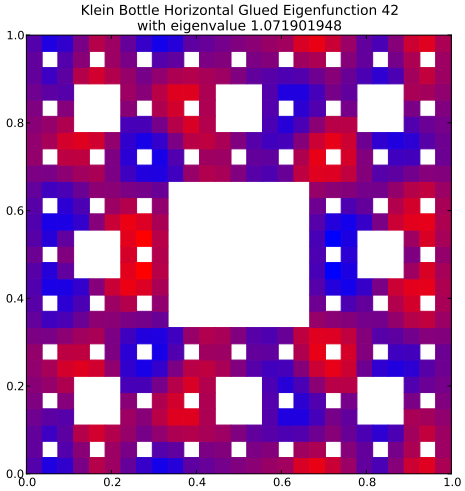
$M = 4$ Eigenfunction 42 has eigenvalue 0.176904932454





Compare to $m = 3$ eigenspace with eigenvalue 1.071901948

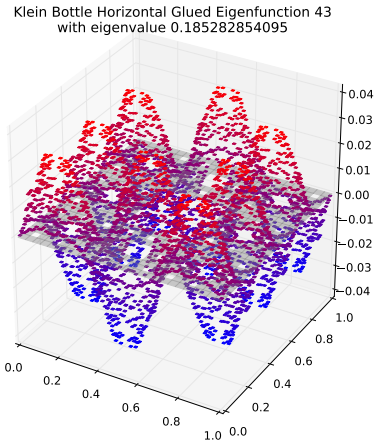


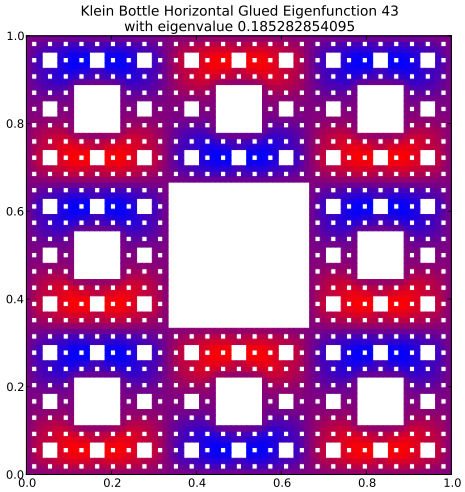


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.165038353353$
Dot Value: 0.003539230691291362

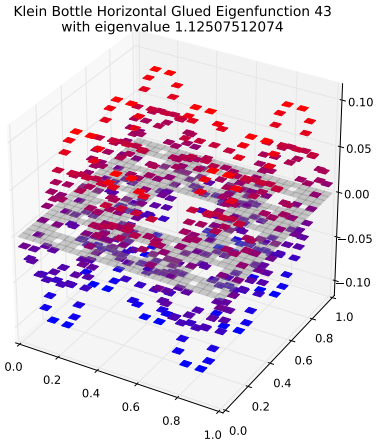
44 $M = 4$ Eigenfunction 43

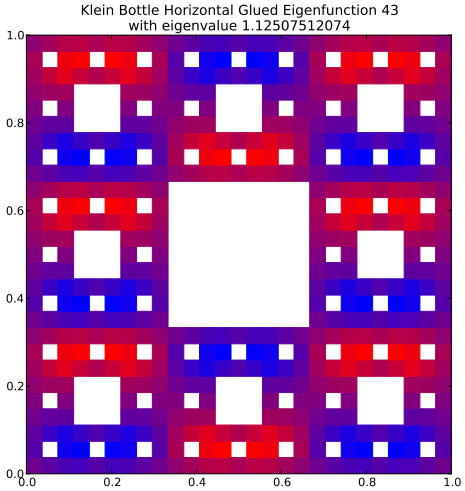
$M = 4$ Eigenfunction 43 has eigenvalue 0.185282854095





Compare to $m = 3$ eigenspace with eigenvalue 1.12507512074

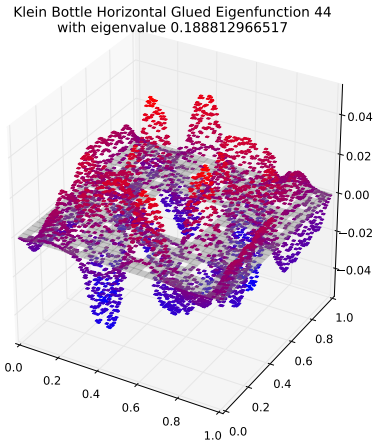


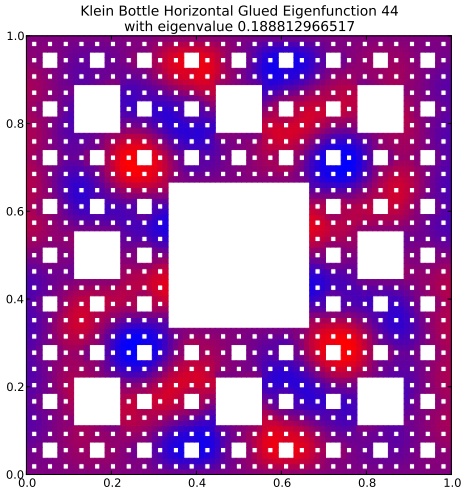


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.16468487364$
Dot Value: 0.0013315311553243614

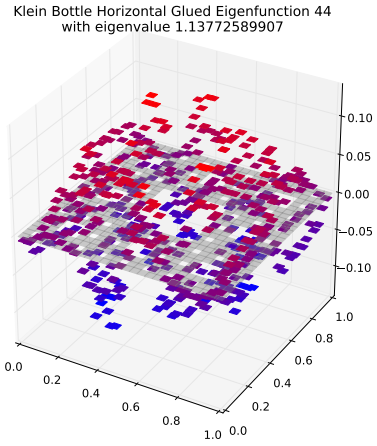
45 $M = 4$ Eigenfunction 44

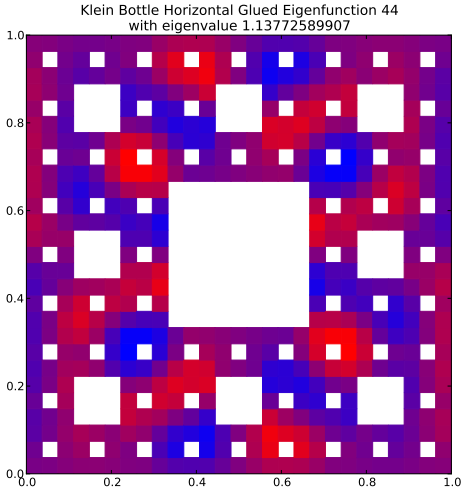
$M = 4$ Eigenfunction 44 has eigenvalue 0.188812966517





Compare to $m = 3$ eigenspace with eigenvalue 1.13772589907

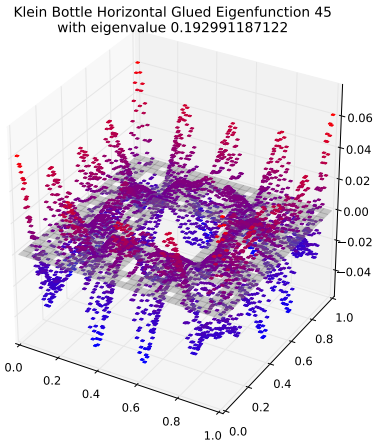


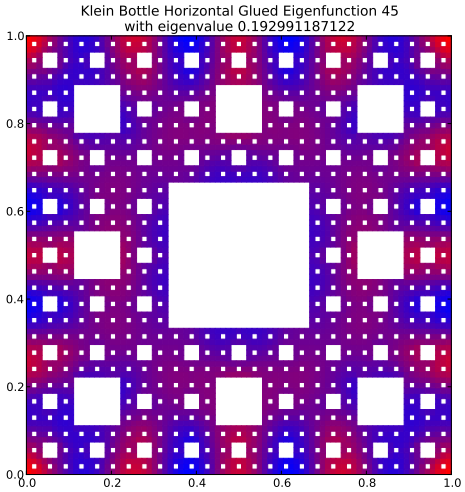


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.16595646339$
Dot Value: 0.0046050146969047745

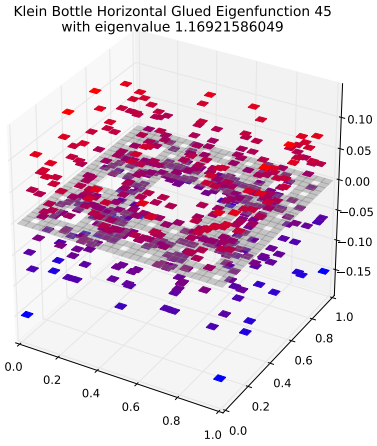
46 $M = 4$ Eigenfunction 45

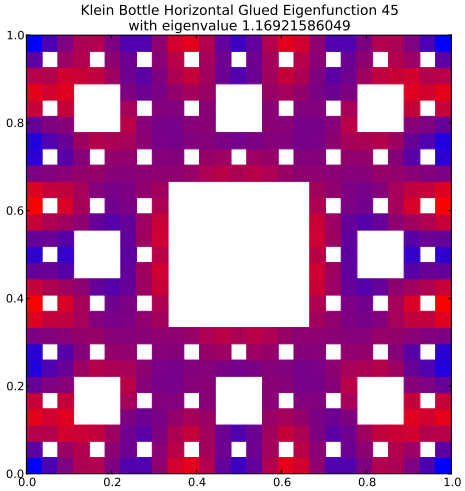
$M = 4$ Eigenfunction 45 has eigenvalue 0.192991187122





Compare to $m = 3$ eigenspace with eigenvalue 1.16921586049

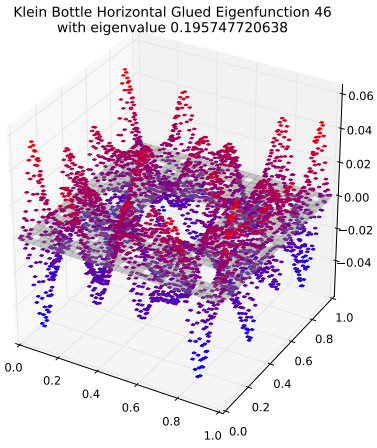


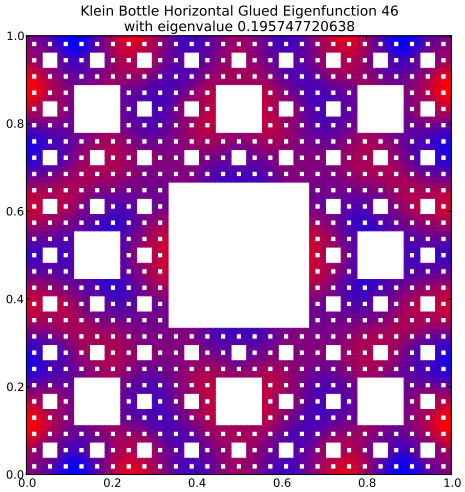


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.165060356812$
Dot Value: 0.05162908195552762

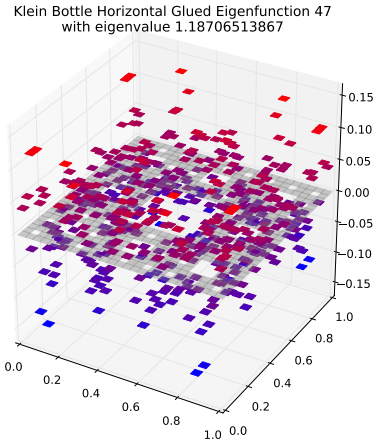
47 $M = 4$ Eigenfunction 46

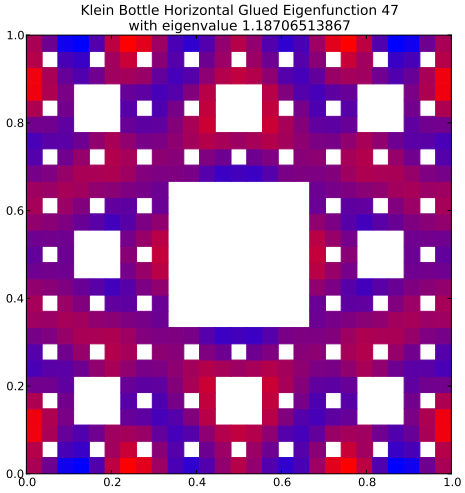
$M = 4$ Eigenfunction 46 has eigenvalue 0.195747720638





Compare to $m = 3$ eigenspace with eigenvalue 1.18706513867

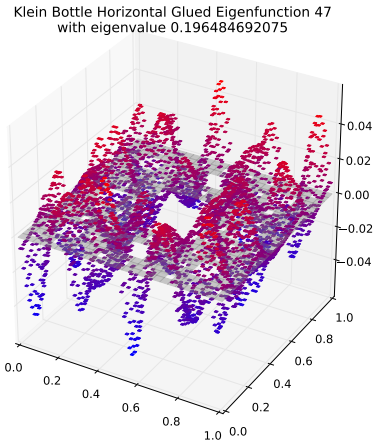


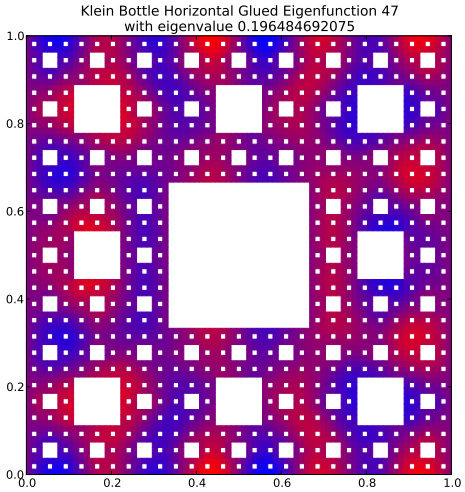


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.164900572227$
Dot Value: 0.05246773022955631

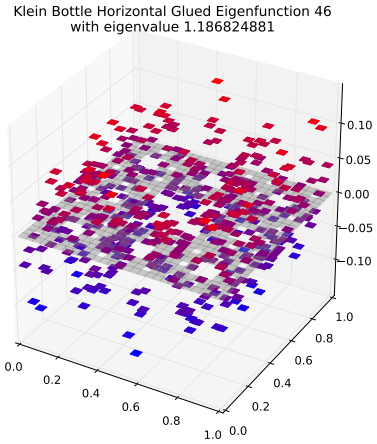
48 $M = 4$ Eigenfunction 47

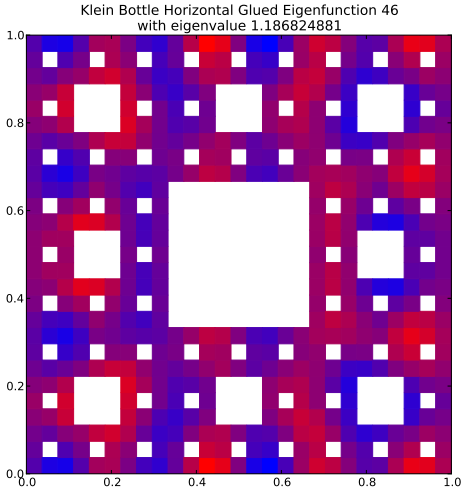
$M = 4$ Eigenfunction 47 has eigenvalue 0.196484692075





Compare to $m = 3$ eigenspace with eigenvalue 1.186824881

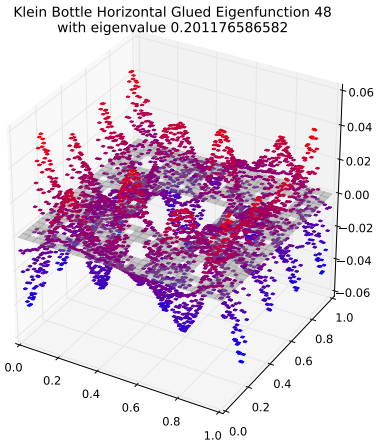


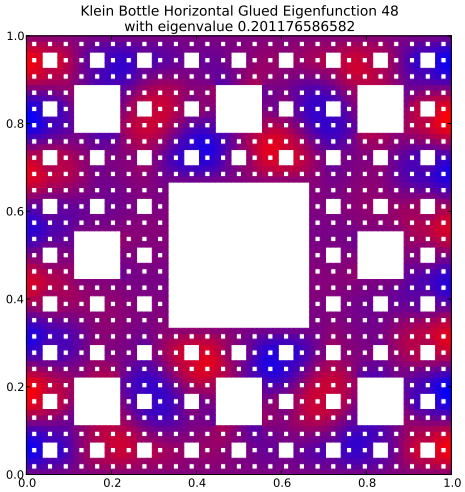


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.165554914816$
Dot Value: 0.006176712465449041

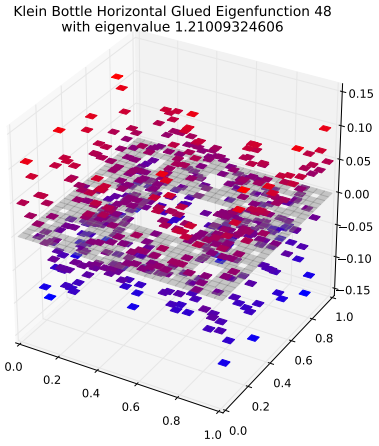
49 $M = 4$ Eigenfunction 48

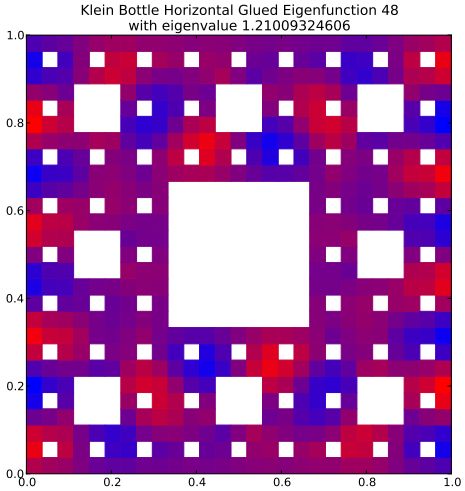
$M = 4$ Eigenfunction 48 has eigenvalue 0.201176586582





Compare to $m = 3$ eigenspace with eigenvalue 1.21009324606

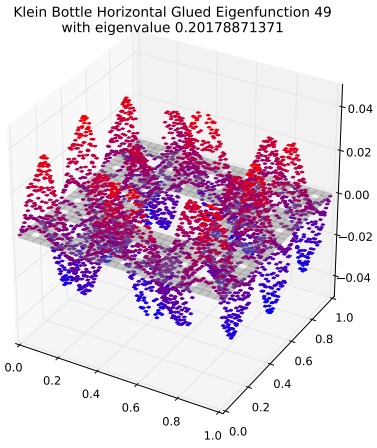


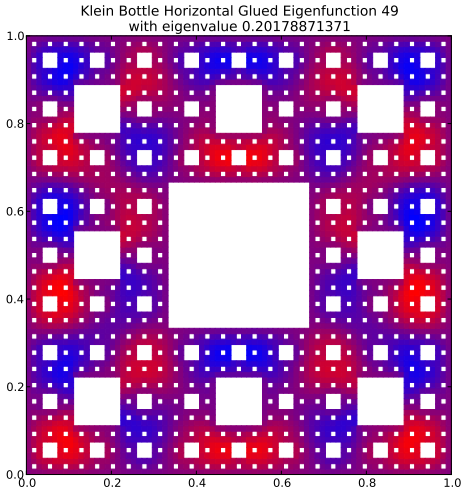


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.166248830193$
Dot Value: 0.00850829960432109

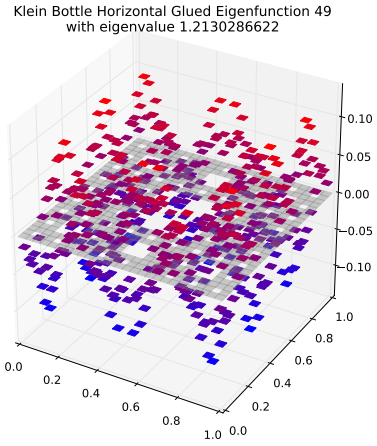
50 $M = 4$ Eigenfunction 49

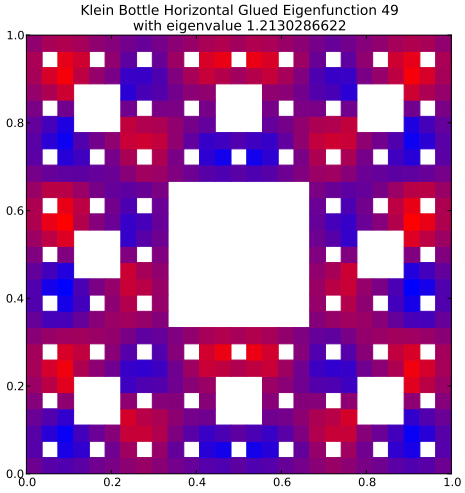
$M = 4$ Eigenfunction 49 has eigenvalue 0.20178871371





Compare to $m = 3$ eigenspace with eigenvalue 1.2130286622

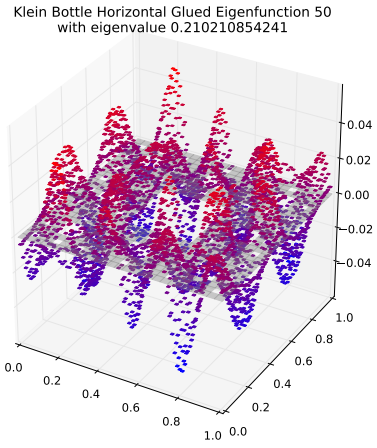


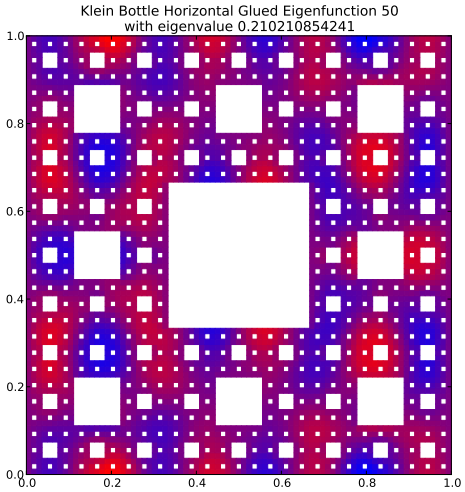


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.166351150635$
Dot Value: 0.005627306383446107

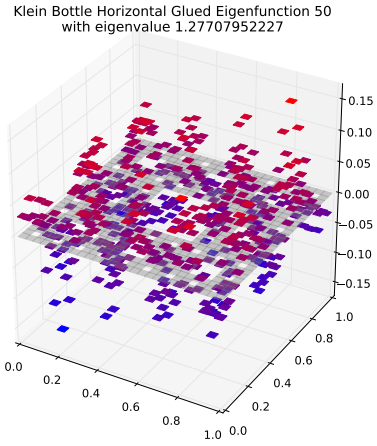
51 $M = 4$ Eigenfunction 50

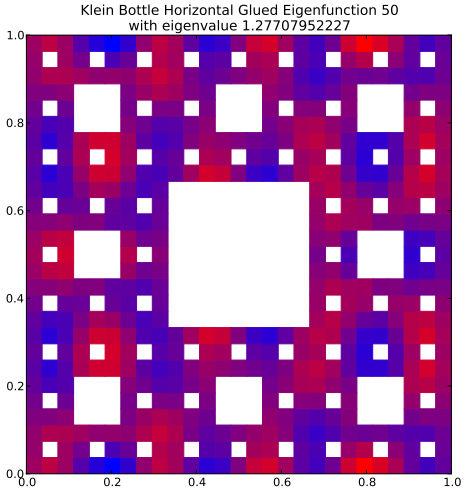
$M = 4$ Eigenfunction 50 has eigenvalue 0.210210854241





Compare to $m = 3$ eigenspace with eigenvalue 1.27707952227

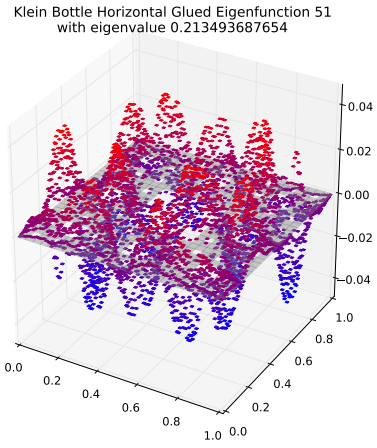


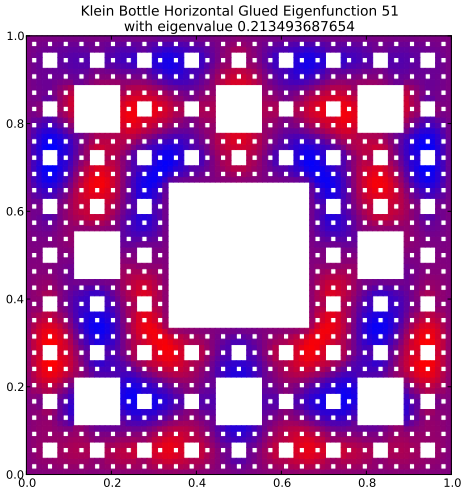


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.164602791427$
Dot Value: 0.006298510315770445

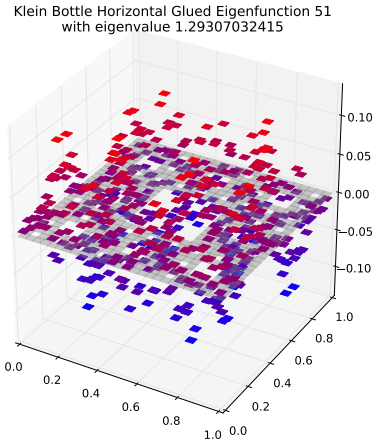
52 $M = 4$ Eigenfunction 51

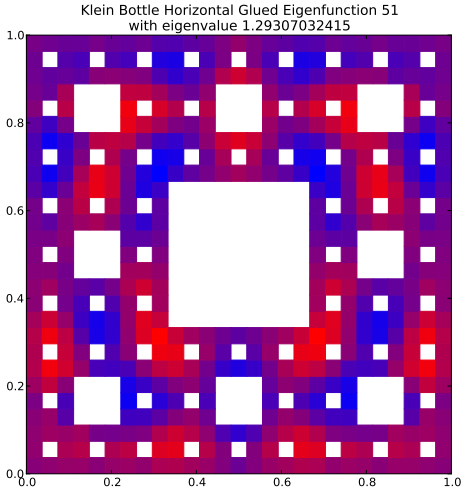
$M = 4$ Eigenfunction 51 has eigenvalue 0.213493687654





Compare to $m = 3$ eigenspace with eigenvalue 1.29307032415

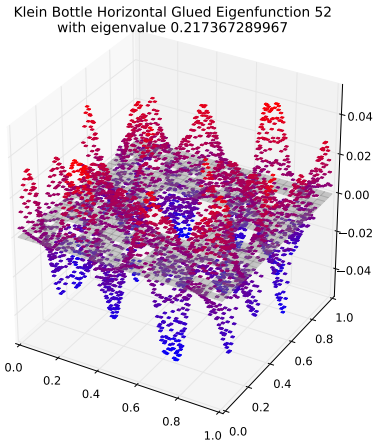


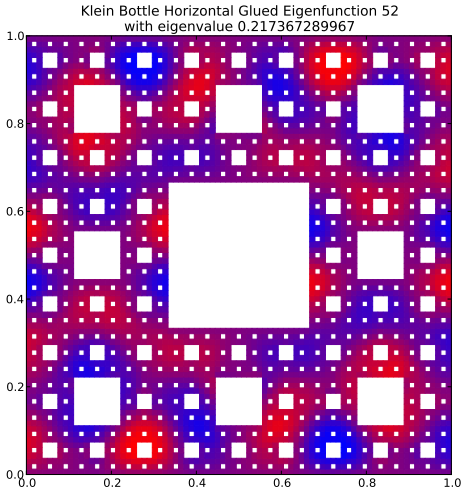


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.165106014473$
Dot Value: 0.005999476093440981

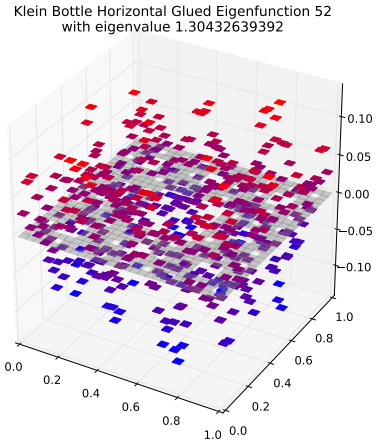
53 $M = 4$ Eigenfunction 52

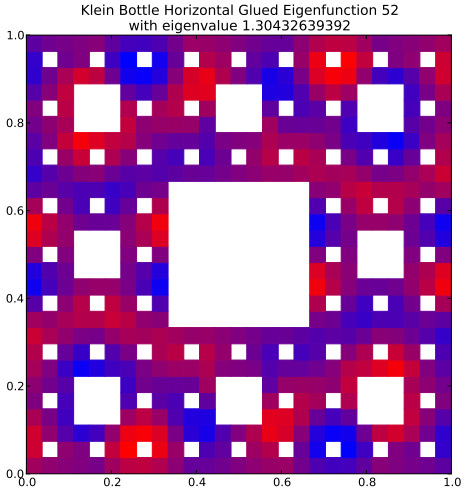
$M = 4$ Eigenfunction 52 has eigenvalue 0.217367289967





Compare to $m = 3$ eigenspace with eigenvalue 1.30432639392

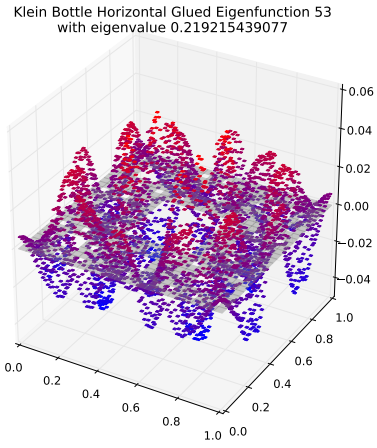


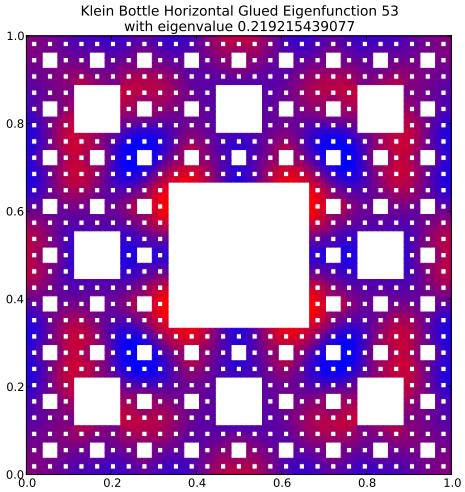


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.166650993939$
Dot Value: 0.007397729878559245

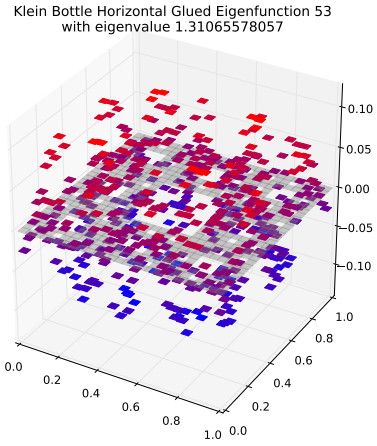
54 $M = 4$ Eigenfunction 53

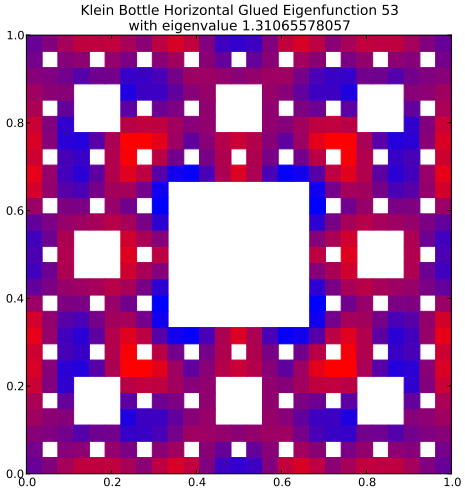
$M = 4$ Eigenfunction 53 has eigenvalue 0.219215439077





Compare to $m = 3$ eigenspace with eigenvalue 1.31065578057

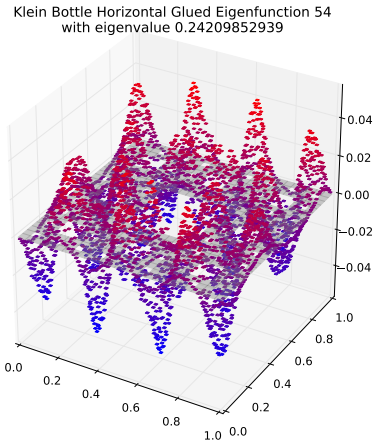


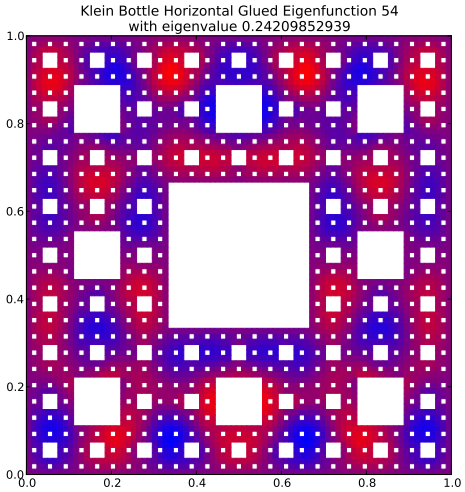


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.167256302018$
Dot Value: 0.014724560094488082

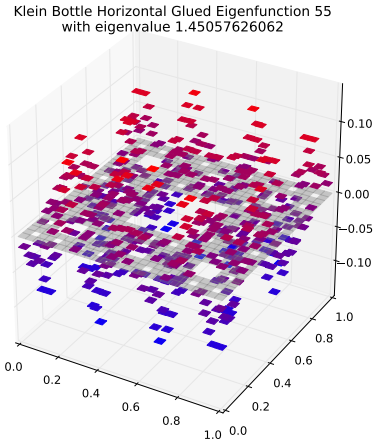
55 $M = 4$ Eigenfunction 54

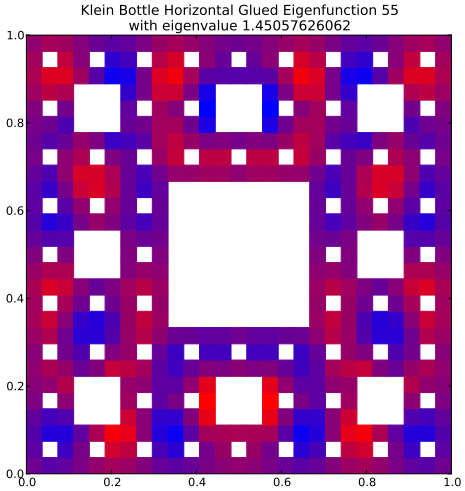
$M = 4$ Eigenfunction 54 has eigenvalue 0.24209852939





Compare to $m = 3$ eigenspace with eigenvalue 1.45057626062

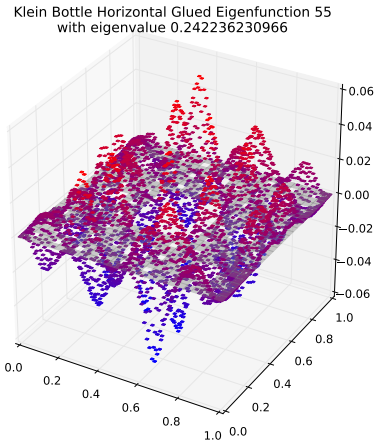


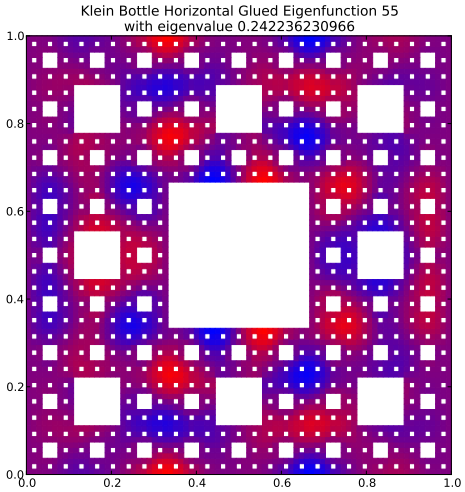


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.166898174169$
Dot Value: 0.08230600823333778

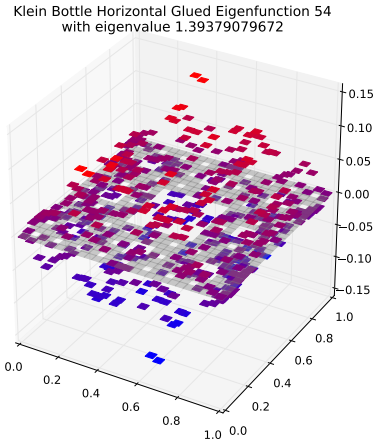
56 $M = 4$ Eigenfunction 55

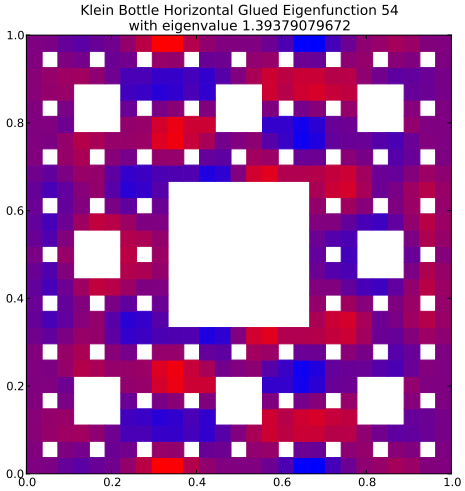
$M = 4$ Eigenfunction 55 has eigenvalue 0.242236230966





Compare to $m = 3$ eigenspace with eigenvalue 1.39379079672

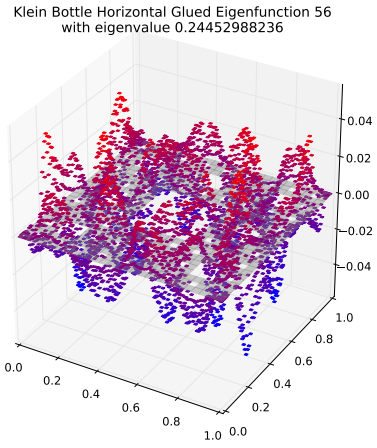


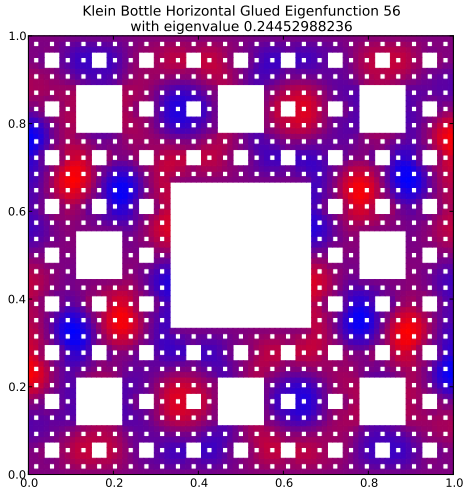


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.173796692829$
Dot Value: 0.032705471803102903

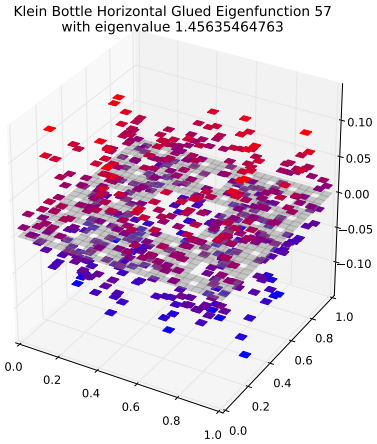
57 $M = 4$ Eigenfunction 56

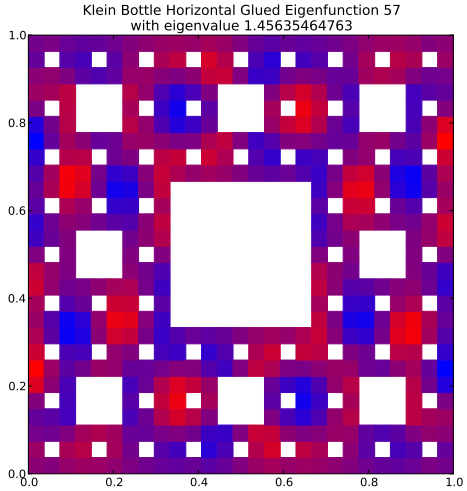
$M = 4$ Eigenfunction 56 has eigenvalue 0.24452988236





Compare to $m = 3$ eigenspace with eigenvalue 1.45635464763

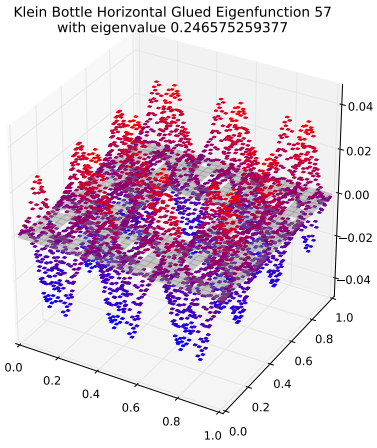


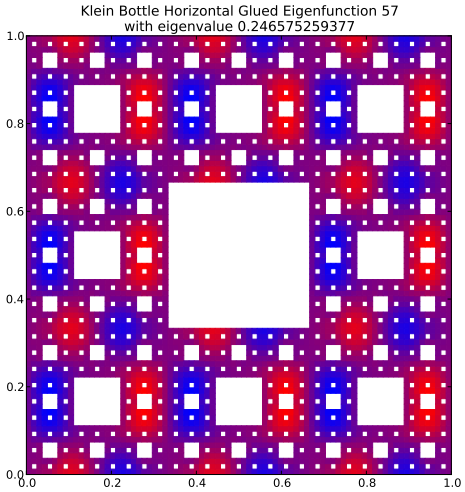


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.167905449924$
Dot Value: 0.02208653590435894

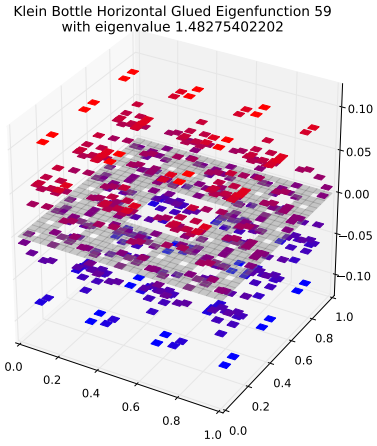
58 $M = 4$ Eigenfunction 57

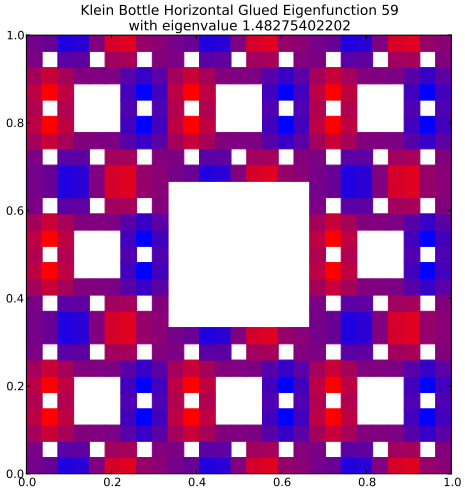
$M = 4$ Eigenfunction 57 has eigenvalue 0.246575259377





Compare to $m = 3$ eigenspace with eigenvalue 1.48275402202

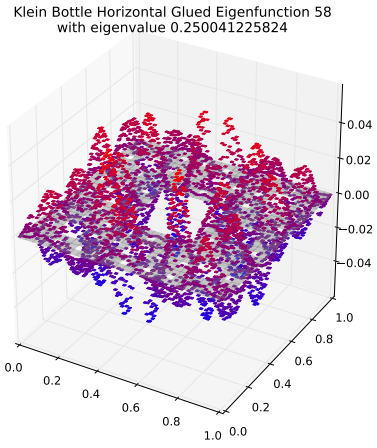


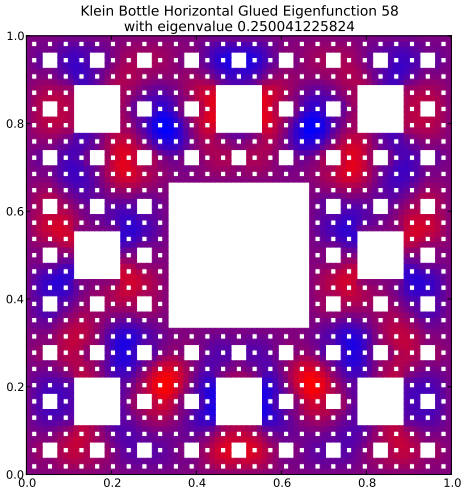


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.166295458124$
Dot Value: 0.0037616232125697 87

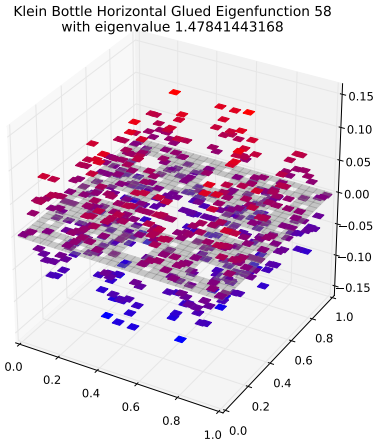
59 $M = 4$ Eigenfunction 58

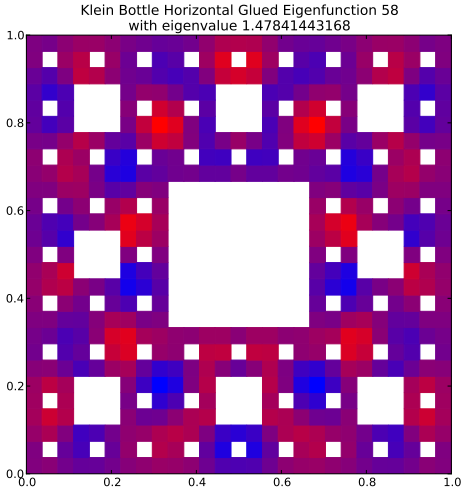
$M = 4$ Eigenfunction 58 has eigenvalue 0.250041225824





Compare to $m = 3$ eigenspace with eigenvalue 1.47841443168

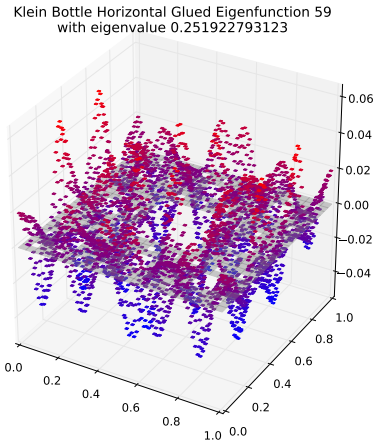


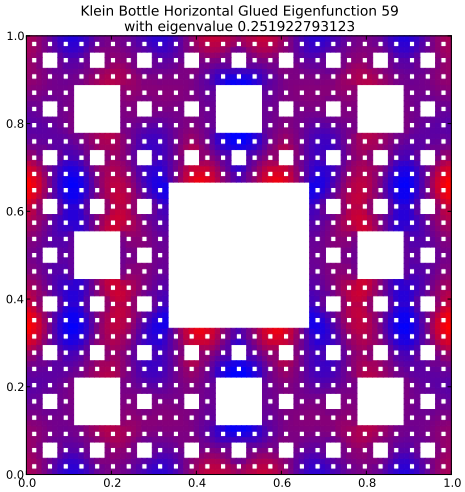


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.16912796606$
Dot Value: 0.08365903010412667

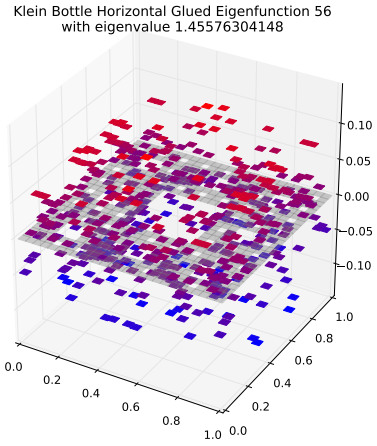
60 $M = 4$ Eigenfunction 59

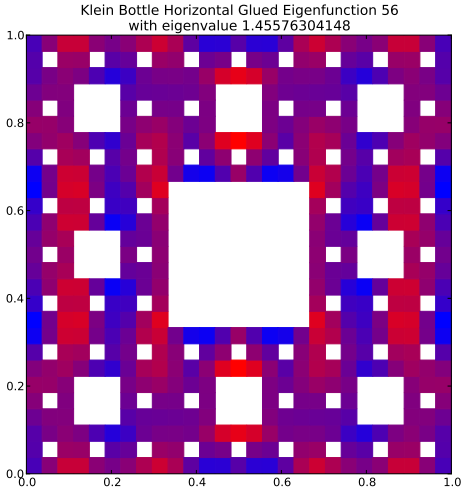
$M = 4$ Eigenfunction 59 has eigenvalue 0.251922793123





Compare to $m = 3$ eigenspace with eigenvalue 1.45576304148

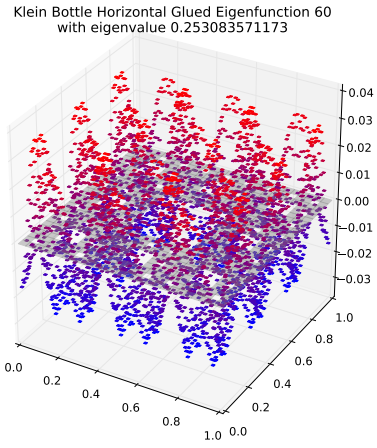


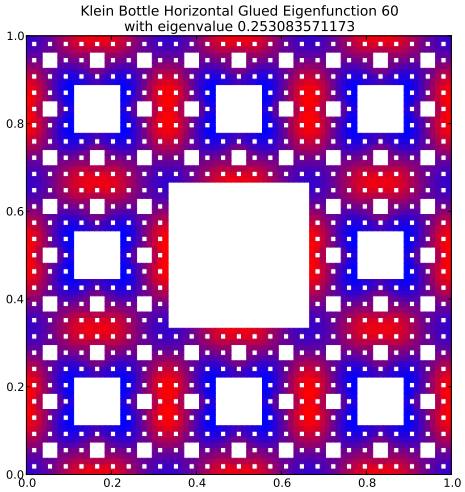


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.173052059947$
Dot Value: 0.012609480191566269

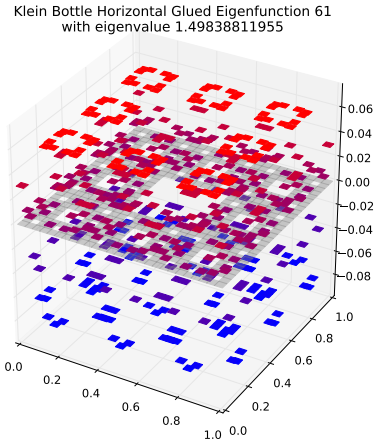
61 $M = 4$ Eigenfunction 60

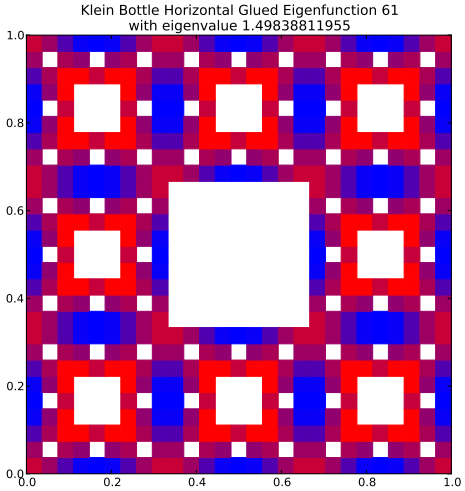
$M = 4$ Eigenfunction 60 has eigenvalue 0.253083571173





Compare to $m = 3$ eigenspace with eigenvalue 1.49838811955

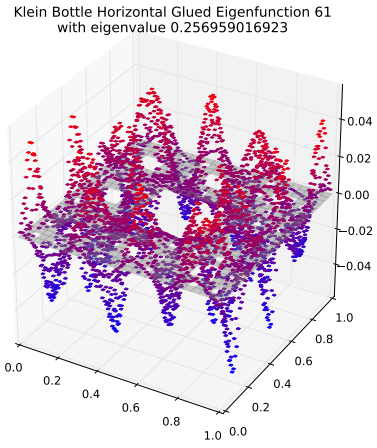


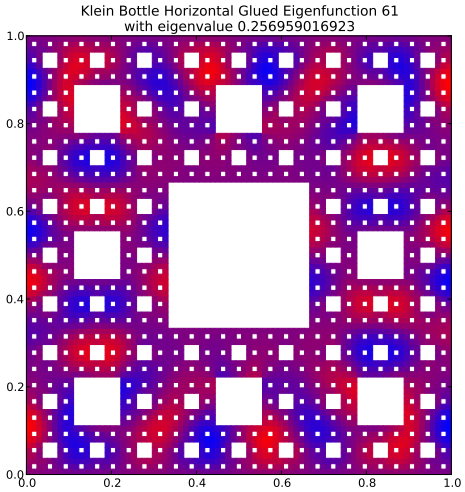


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.168903882693$
Dot Value: 0.01471818936863778

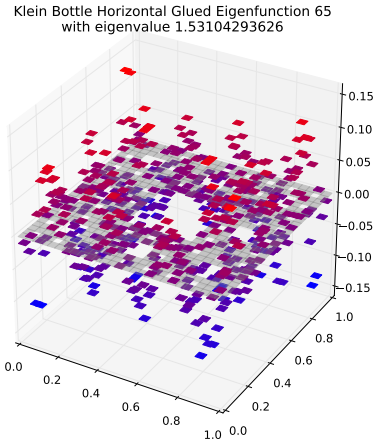
62 $M = 4$ Eigenfunction 61

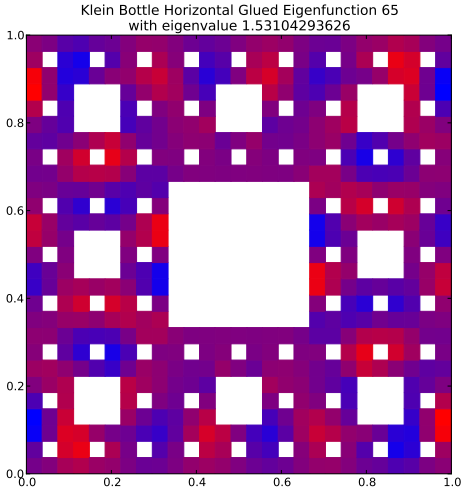
$M = 4$ Eigenfunction 61 has eigenvalue 0.256959016923





Compare to $m = 3$ eigenspace with eigenvalue 1.53104293626

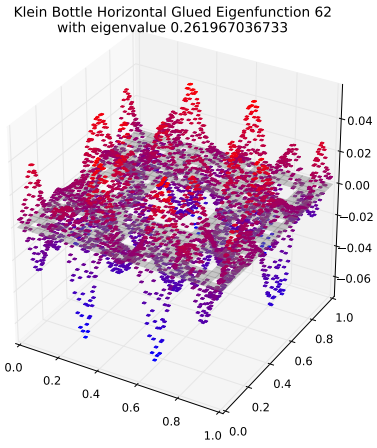


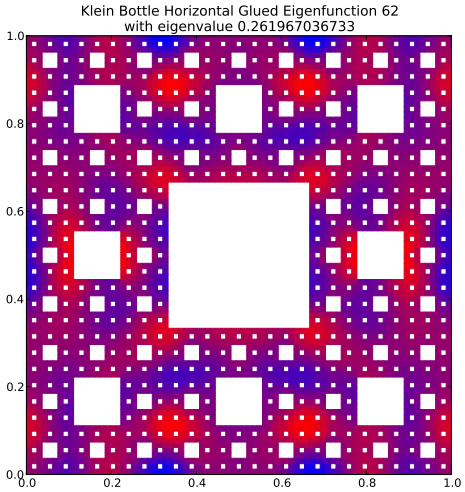


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.167832665458$
Dot Value: 0.06859365218030167

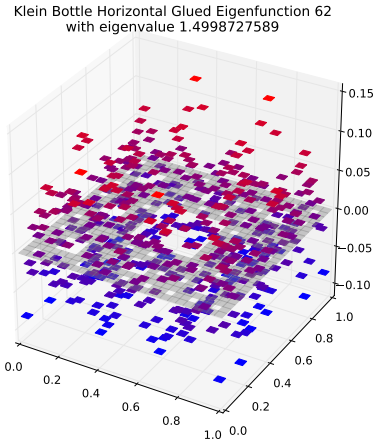
63 $M = 4$ Eigenfunction 62

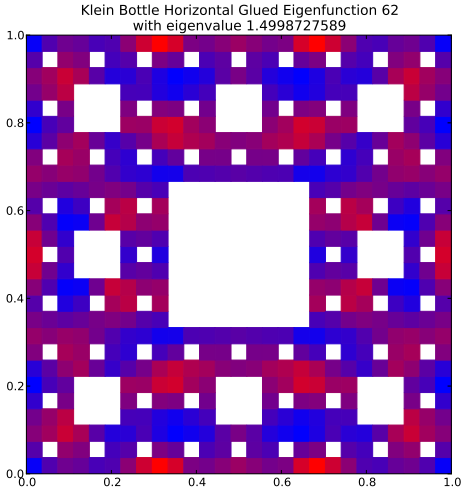
$M = 4$ Eigenfunction 62 has eigenvalue 0.261967036733





Compare to $m = 3$ eigenspace with eigenvalue 1.4998727589

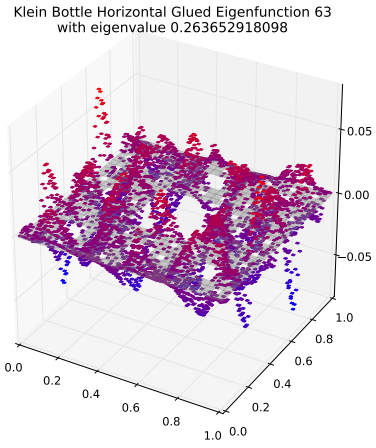


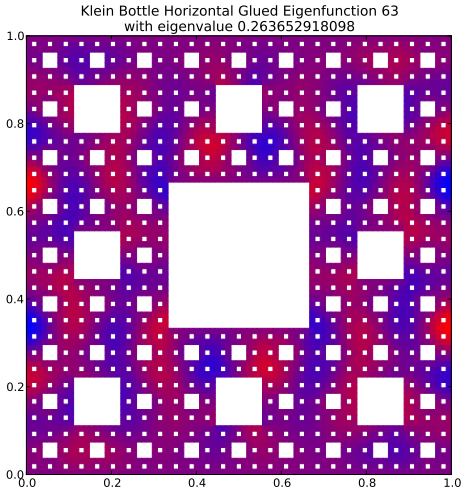


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.174659507067$
Dot Value: 0.25461653461478484

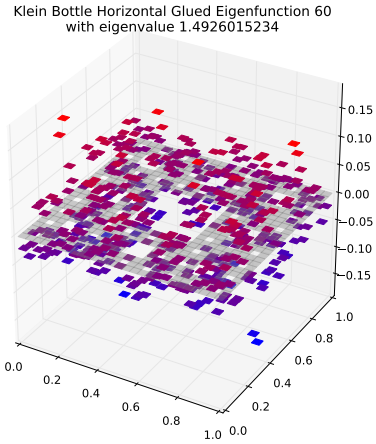
64 $M = 4$ Eigenfunction 63

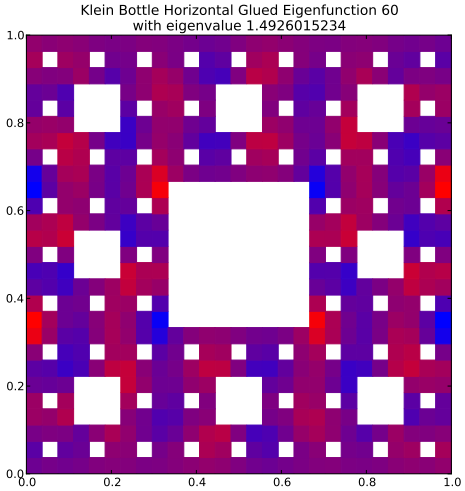
$M = 4$ Eigenfunction 63 has eigenvalue 0.263652918098





Compare to $m = 3$ eigenspace with eigenvalue 1.4926015234

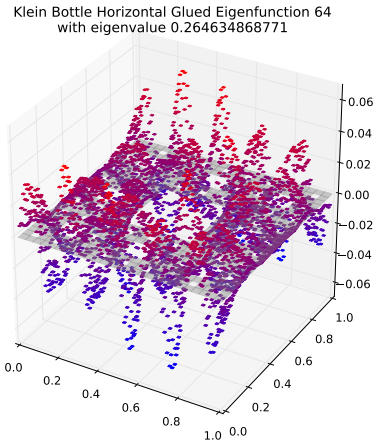


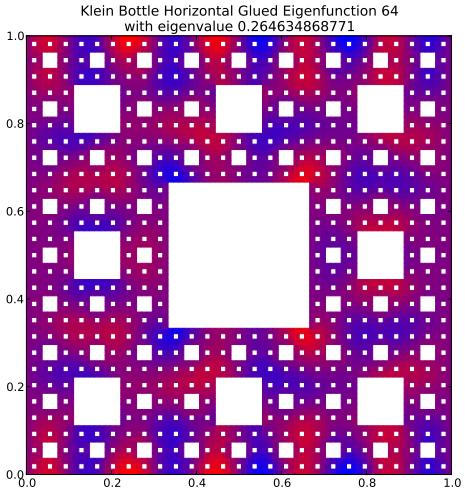


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.176639855959$
Dot Value: 0.1529957235757231

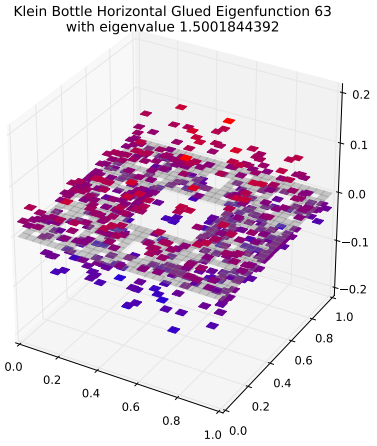
65 $M = 4$ Eigenfunction 64

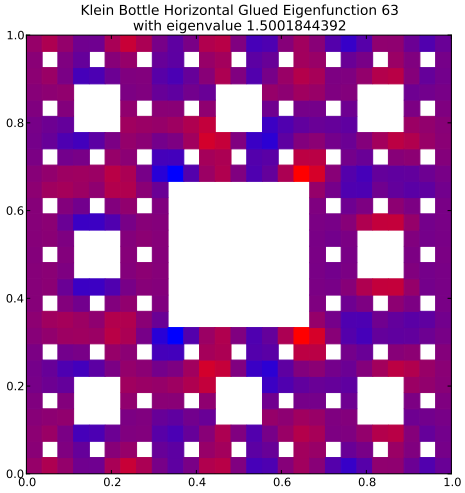
$M = 4$ Eigenfunction 64 has eigenvalue 0.264634868771





Compare to $m = 3$ eigenspace with eigenvalue 1.5001844392

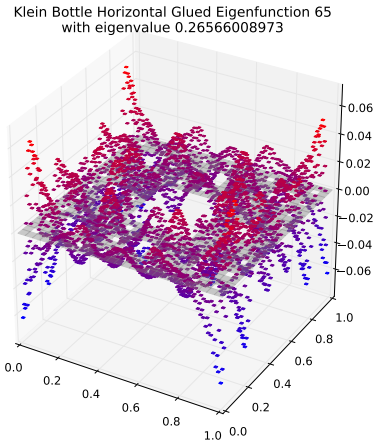


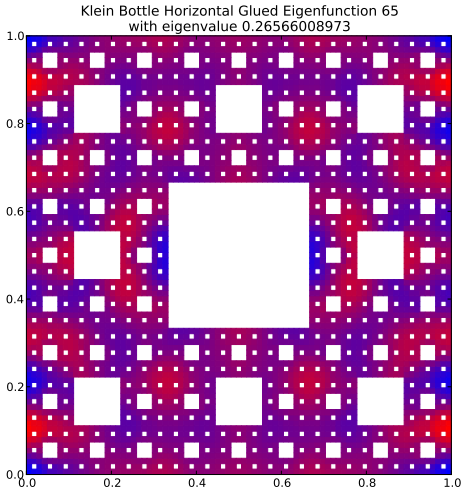


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.176401555607$
Dot Value: 0.08011716379698042

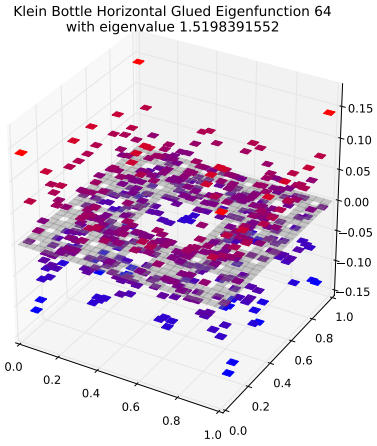
66 $M = 4$ Eigenfunction 65

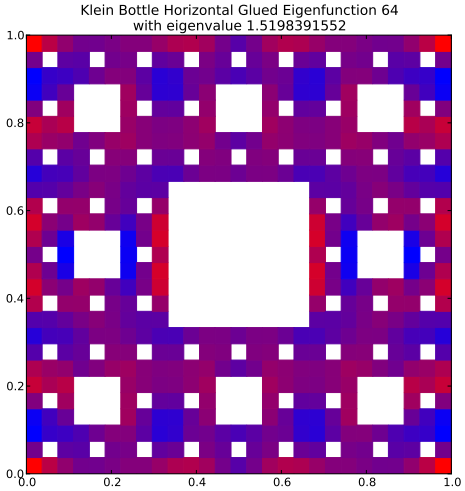
$M = 4$ Eigenfunction 65 has eigenvalue 0.26566008973





Compare to $m = 3$ eigenspace with eigenvalue 1.5198391552

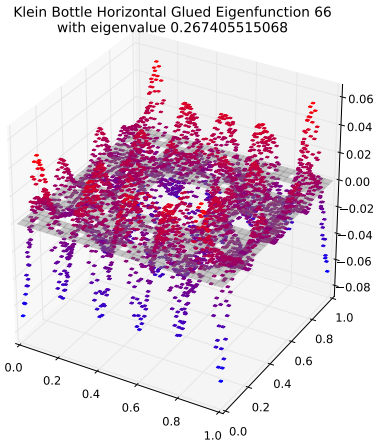


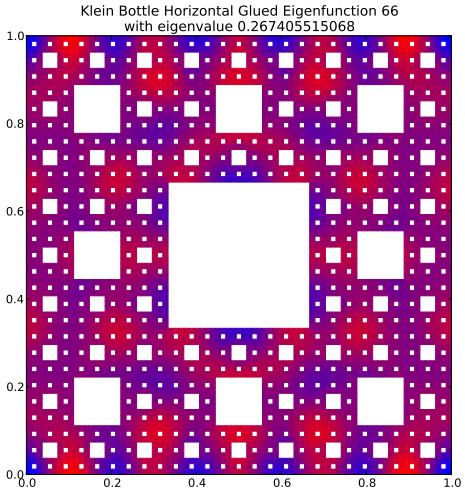


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.174794871432$
Dot Value: 0.32542777478023577

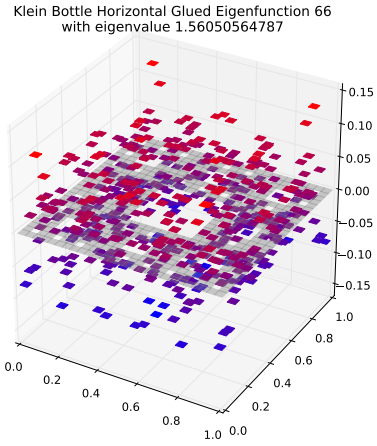
67 $M = 4$ Eigenfunction 66

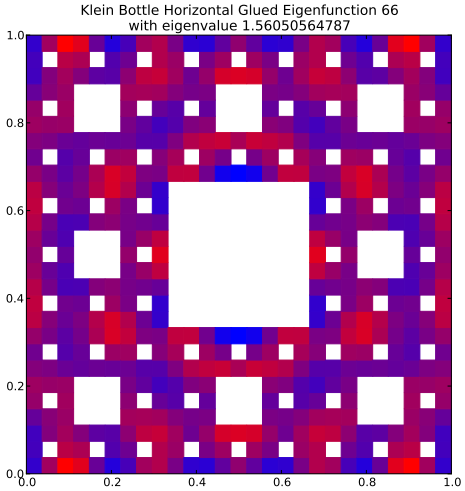
$M = 4$ Eigenfunction 66 has eigenvalue 0.267405515068





Compare to $m = 3$ eigenspace with eigenvalue 1.56050564787

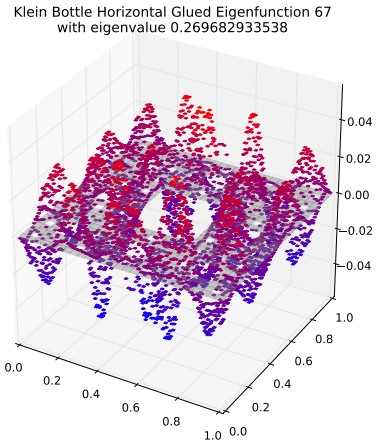


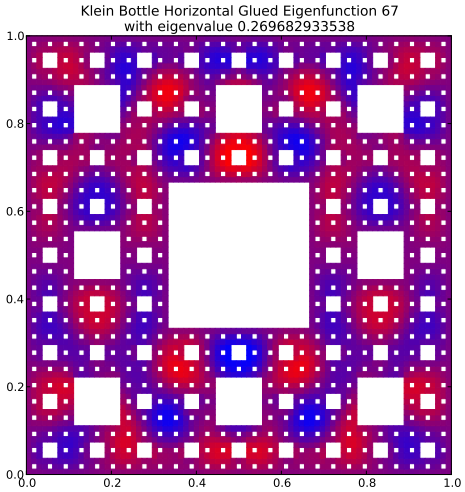


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.171358248804$
Dot Value: 0.1304489879184617

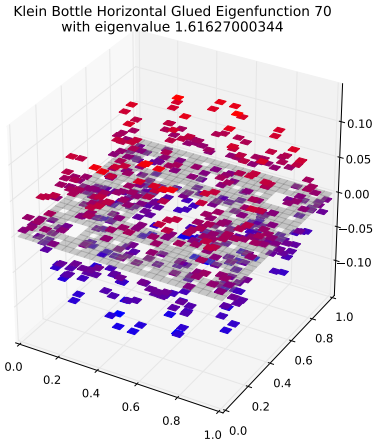
68 $M = 4$ Eigenfunction 67

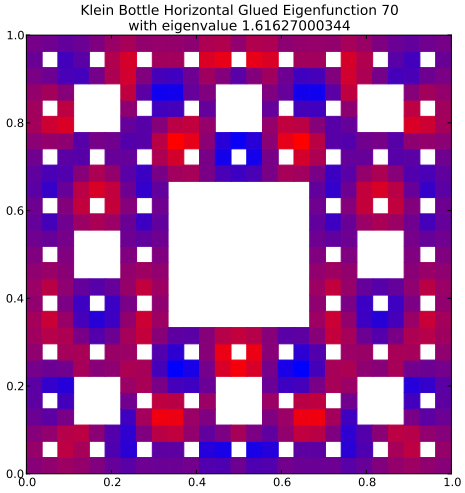
$M = 4$ Eigenfunction 67 has eigenvalue 0.269682933538





Compare to $m = 3$ eigenspace with eigenvalue 1.61627000344

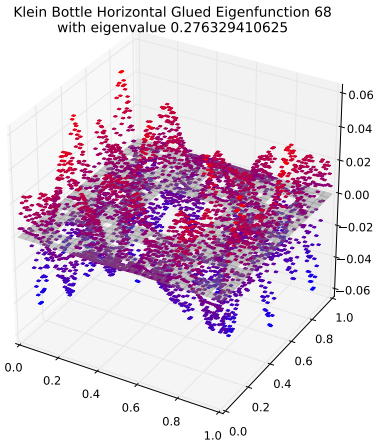


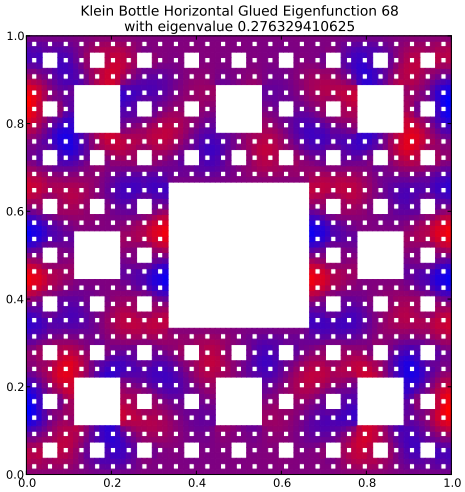


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.16685512505$
Dot Value: 0.008807150072187797

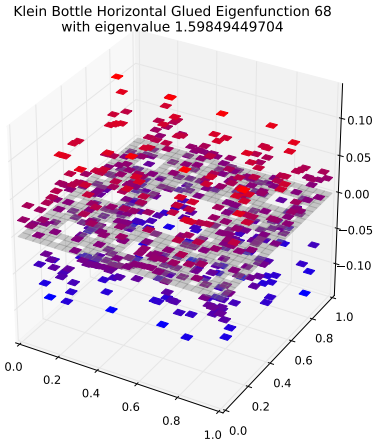
69 $M = 4$ Eigenfunction 68

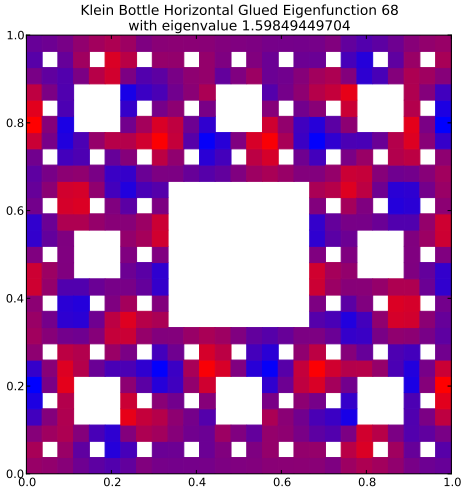
$M = 4$ Eigenfunction 68 has eigenvalue 0.276329410625





Compare to $m = 3$ eigenspace with eigenvalue 1.59849449704

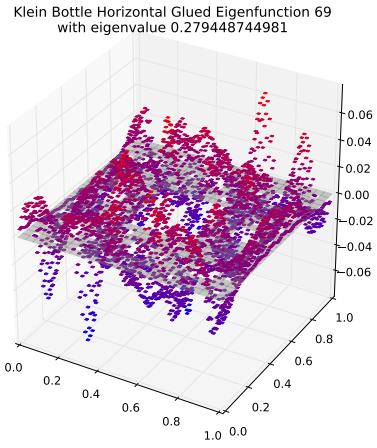


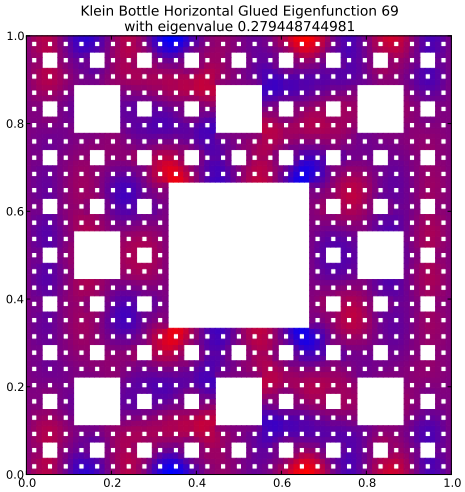


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.172868540453$
Dot Value: 0.16296782706107293

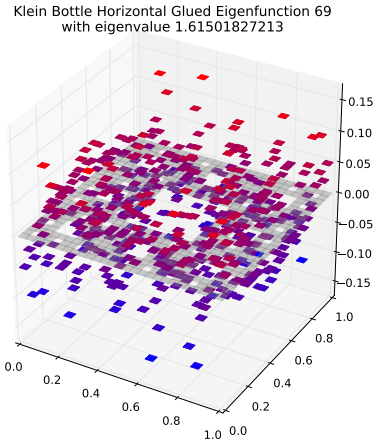
70 $M = 4$ Eigenfunction 69

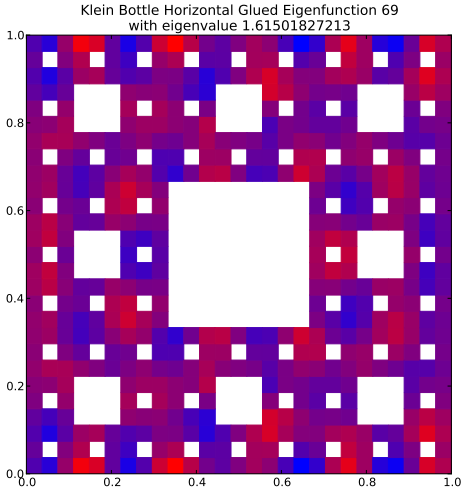
$M = 4$ Eigenfunction 69 has eigenvalue 0.279448744981





Compare to $m = 3$ eigenspace with eigenvalue 1.61501827213

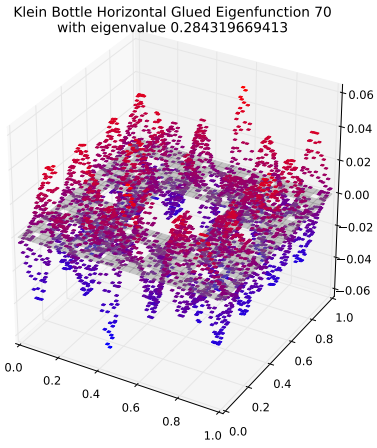


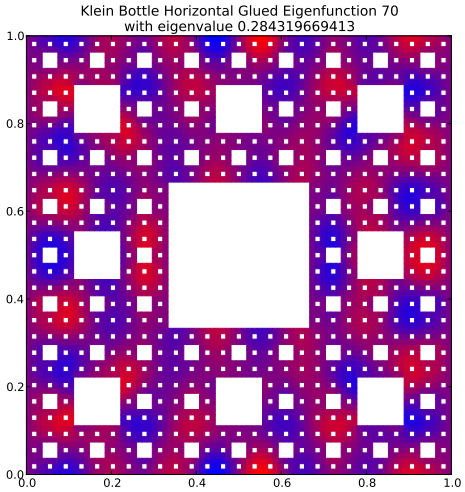


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.173031320948$
Dot Value: 0.08780339735877984

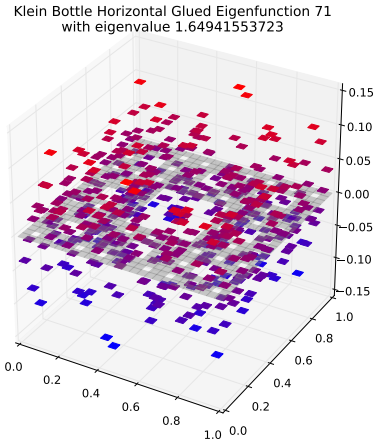
71 $M = 4$ Eigenfunction 70

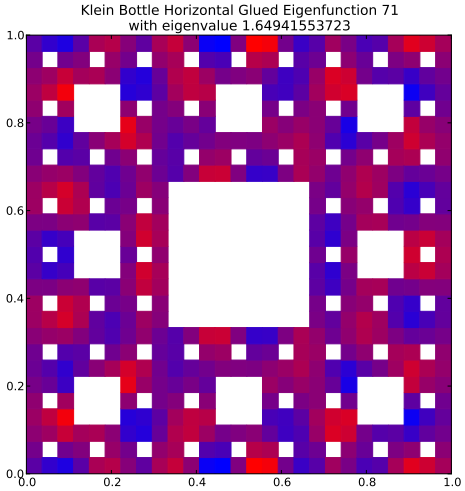
$M = 4$ Eigenfunction 70 has eigenvalue 0.284319669413





Compare to $m = 3$ eigenspace with eigenvalue 1.64941553723

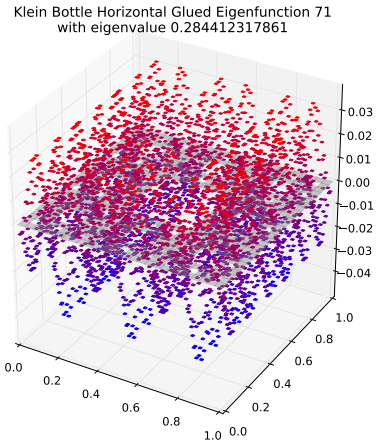


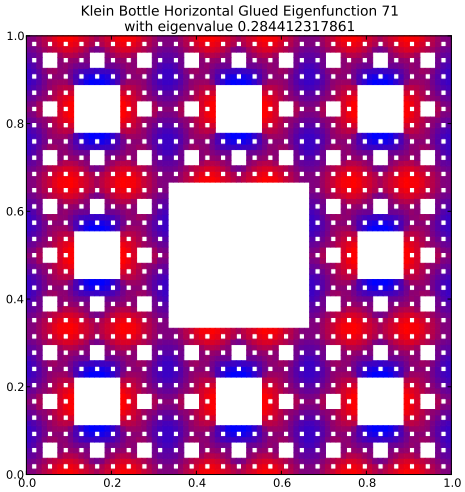


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.172376010166$
Dot Value: 0.03156969062442916

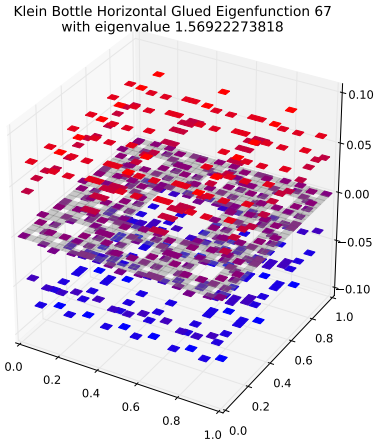
72 $M = 4$ Eigenfunction 71

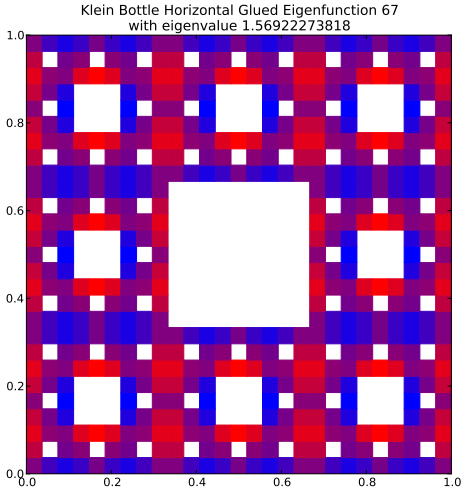
$M = 4$ Eigenfunction 71 has eigenvalue 0.284412317861





Compare to $m = 3$ eigenspace with eigenvalue 1.56922273818

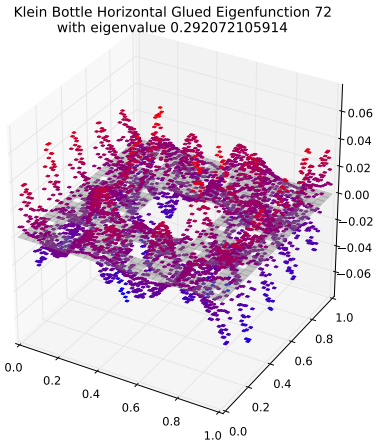


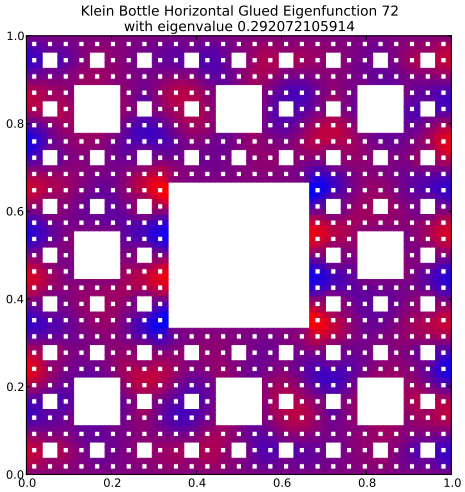


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.181244071311$
Dot Value: 0.011905936095733649

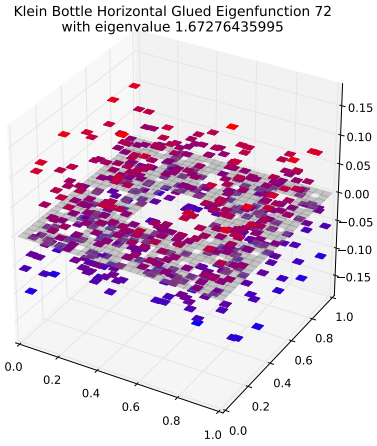
73 $M = 4$ Eigenfunction 72

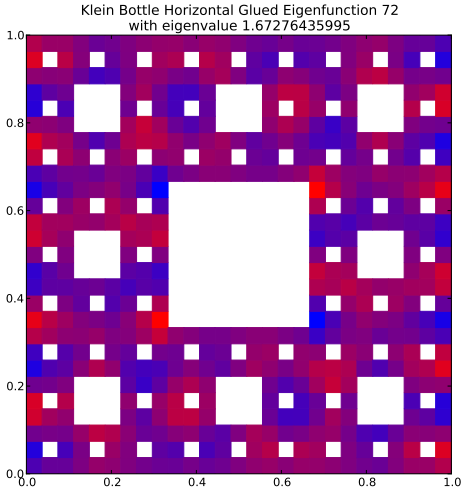
$M = 4$ Eigenfunction 72 has eigenvalue 0.292072105914





Compare to $m = 3$ eigenspace with eigenvalue 1.67276435995

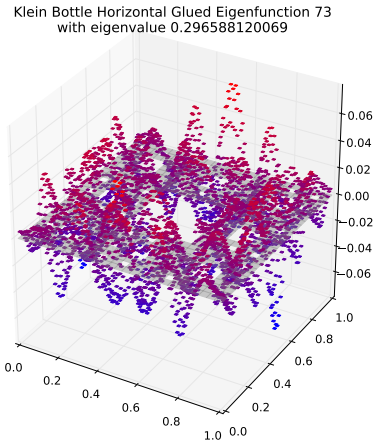


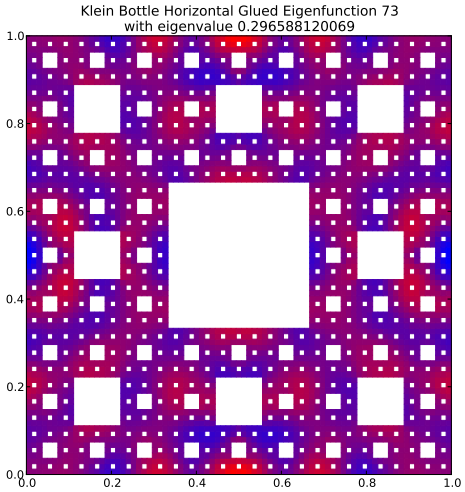


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.174604452909$
Dot Value: 0.0593402468191766

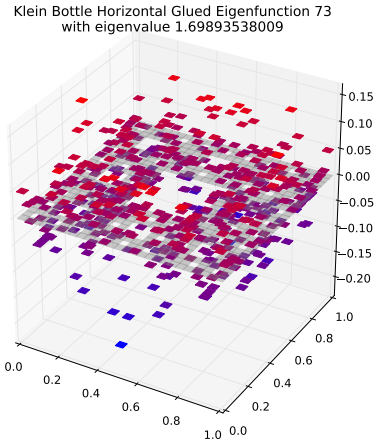
74 $M = 4$ Eigenfunction 73

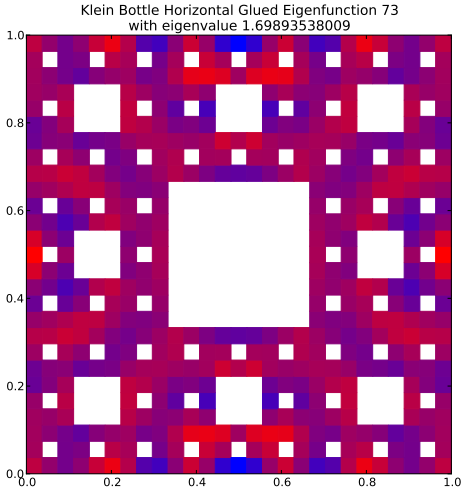
$M = 4$ Eigenfunction 73 has eigenvalue 0.296588120069





Compare to $m = 3$ eigenspace with eigenvalue 1.69893538009

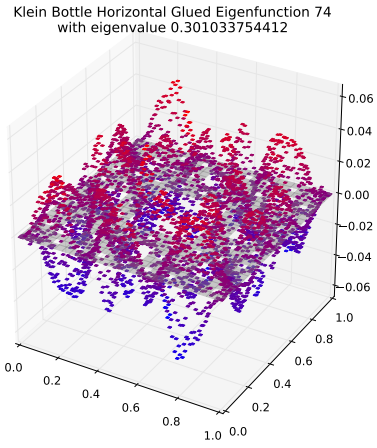


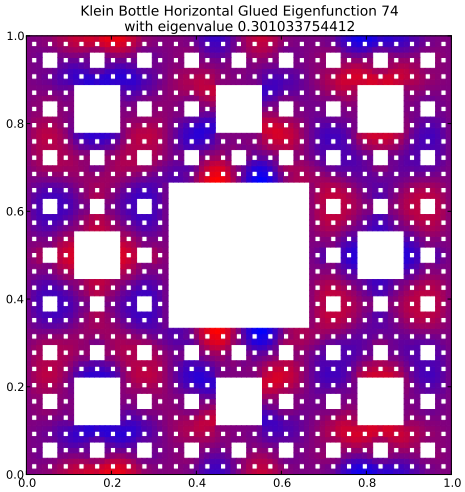


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.174572925812$
Dot Value: 0.08987806885894878

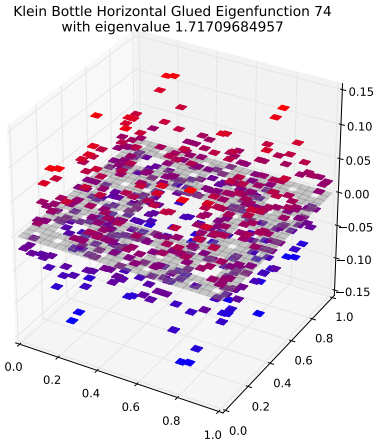
75 $M = 4$ Eigenfunction 74

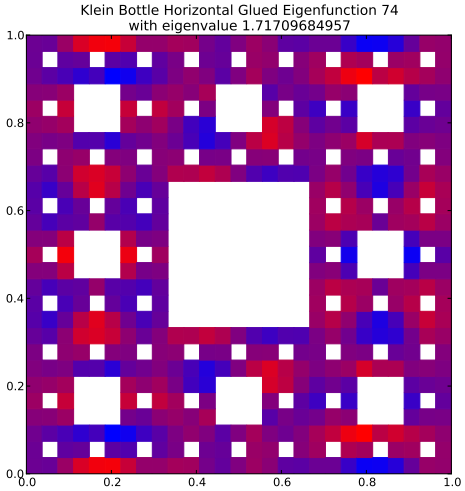
$M = 4$ Eigenfunction 74 has eigenvalue 0.301033754412





Compare to $m = 3$ eigenspace with eigenvalue 1.71709684957

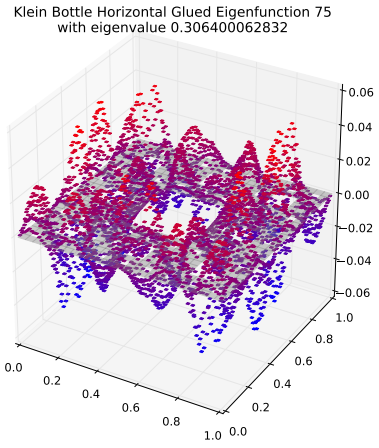


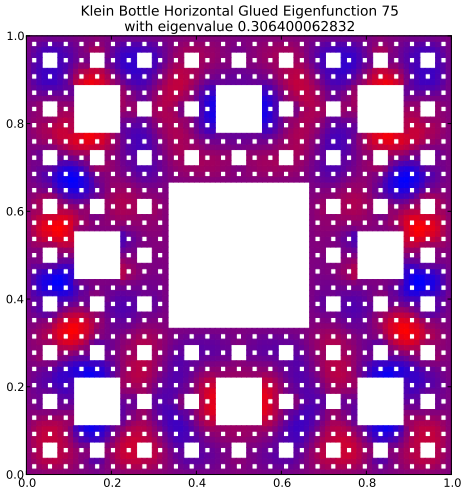


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.175315535922$
Dot Value: 0.2624614963997618

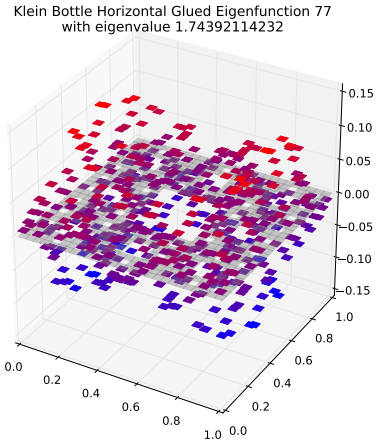
76 $M = 4$ Eigenfunction 75

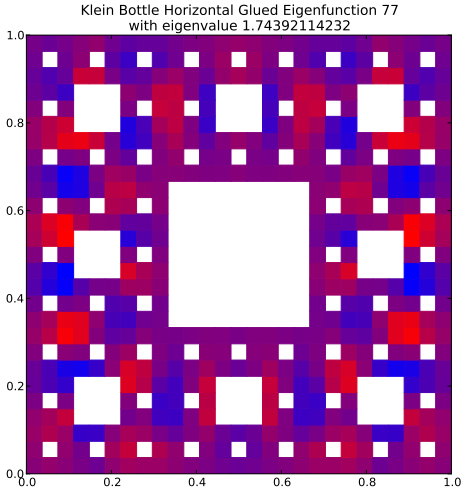
$M = 4$ Eigenfunction 75 has eigenvalue 0.306400062832





Compare to $m = 3$ eigenspace with eigenvalue 1.74392114232

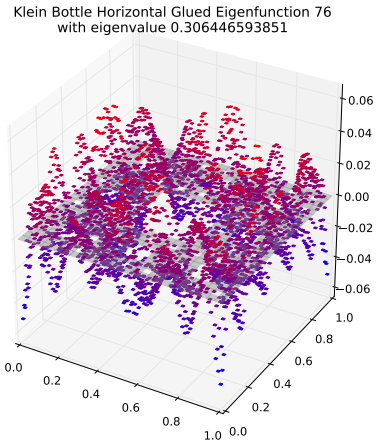


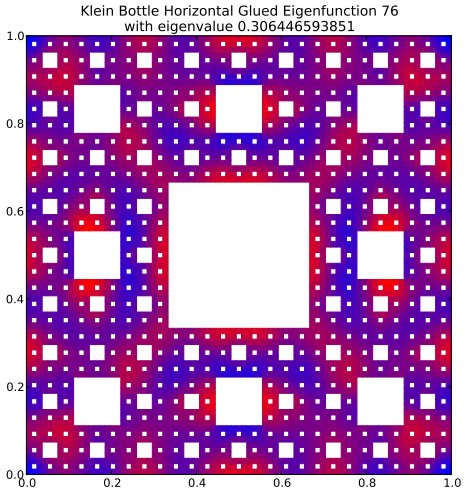


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.175696053792$
Dot Value: 0.13226489426121657

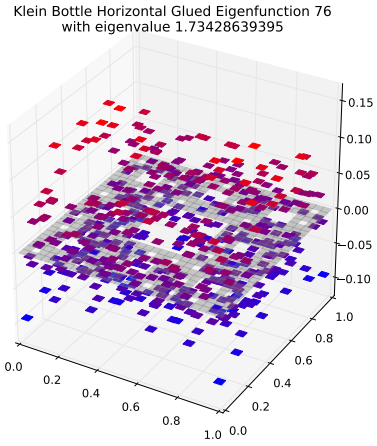
77 $M = 4$ Eigenfunction 76

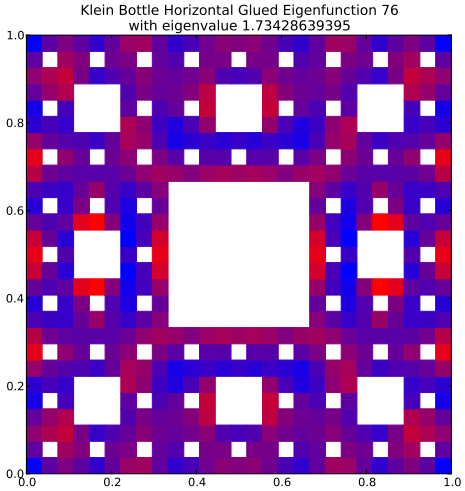
$M = 4$ Eigenfunction 76 has eigenvalue 0.306446593851





Compare to $m = 3$ eigenspace with eigenvalue 1.73428639395

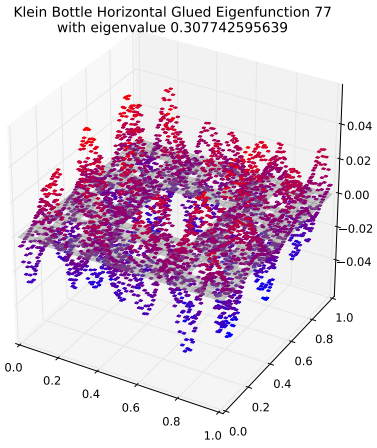


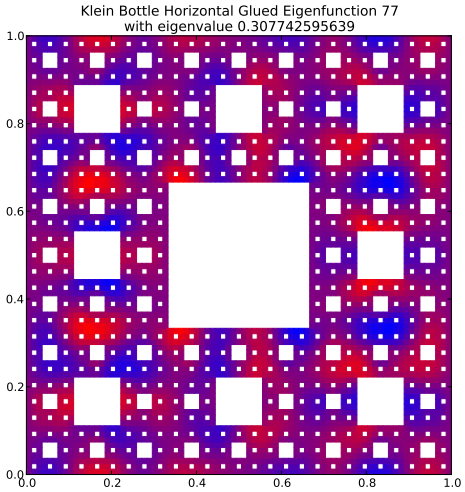


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.176698955213$
Dot Value: 0.07323129973893039

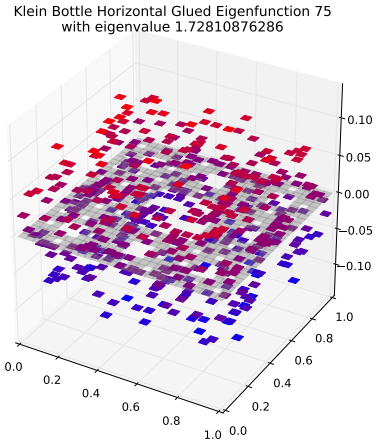
78 $M = 4$ Eigenfunction 77

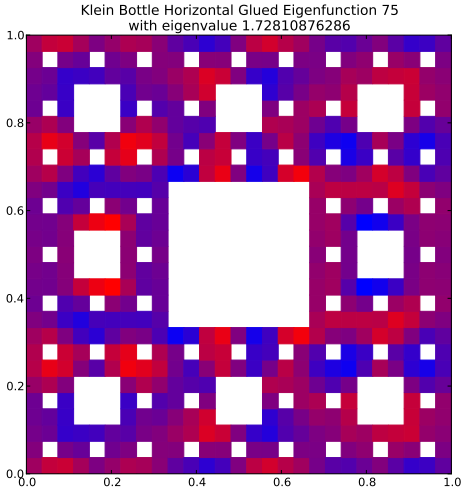
$M = 4$ Eigenfunction 77 has eigenvalue 0.307742595639





Compare to $m = 3$ eigenspace with eigenvalue 1.72810876286

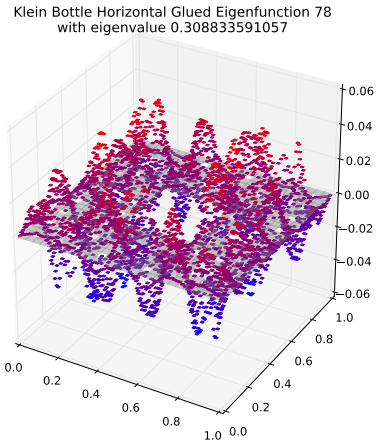


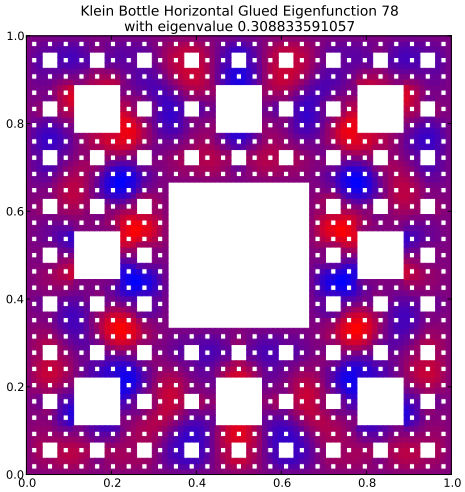


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.17808057123$
Dot Value: 0.2581624872011119

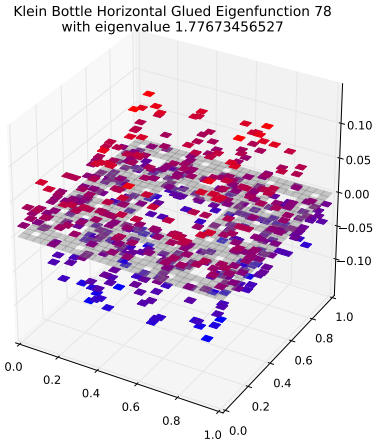
79 $M = 4$ Eigenfunction 78

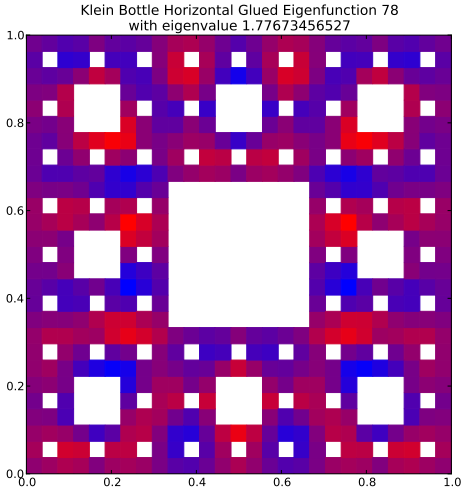
$M = 4$ Eigenfunction 78 has eigenvalue 0.308833591057





Compare to $m = 3$ eigenspace with eigenvalue 1.77673456527

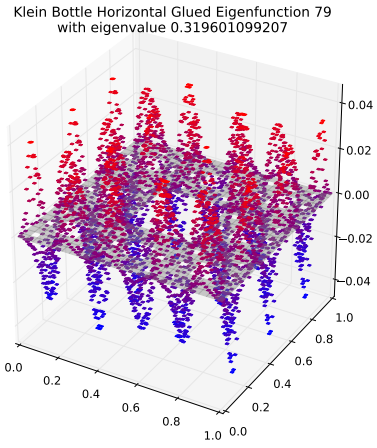


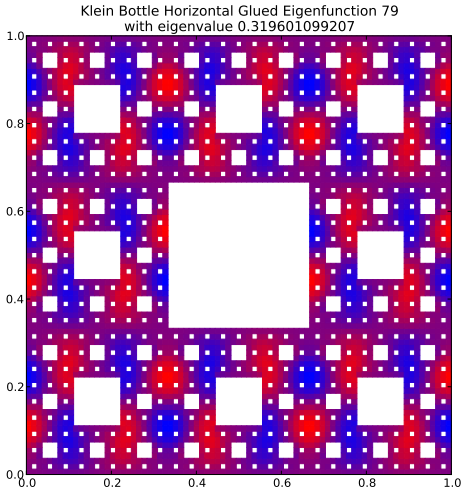


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.173820894293$
Dot Value: 0.15555674179761259

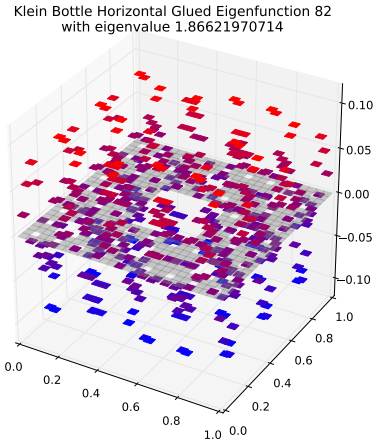
80 $M = 4$ Eigenfunction 79

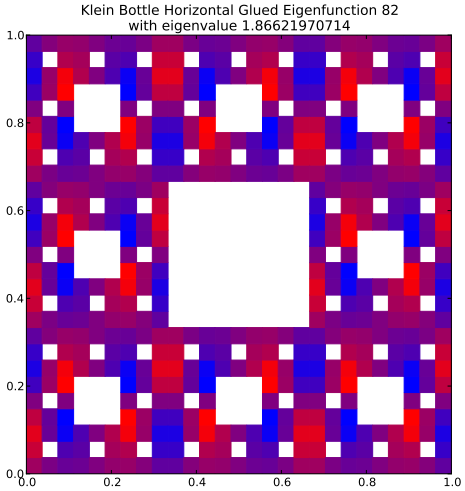
$M = 4$ Eigenfunction 79 has eigenvalue 0.319601099207





Compare to $m = 3$ eigenspace with eigenvalue 1.86621970714

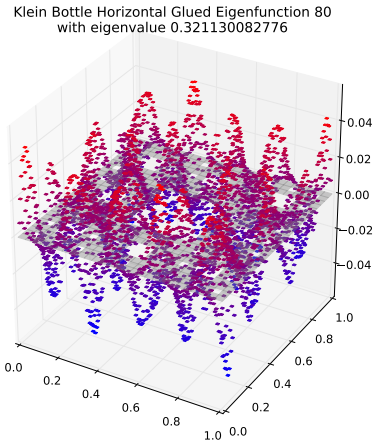


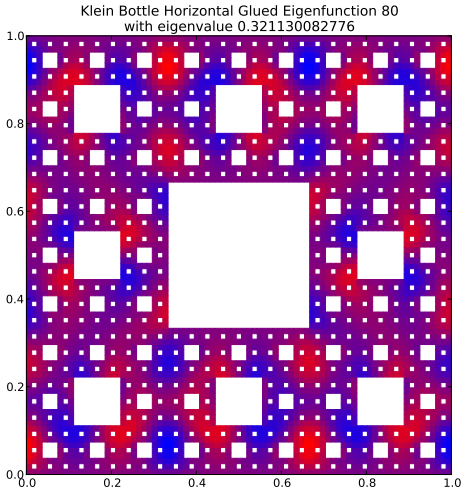


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.171255880529$
Dot Value: 0.08498327717135912

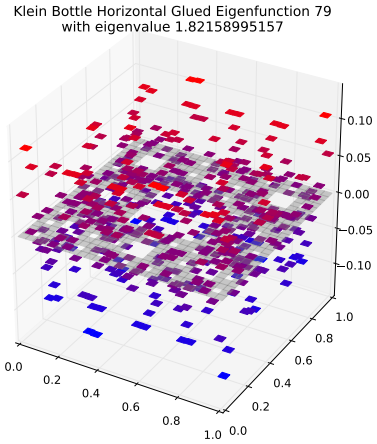
81 $M = 4$ Eigenfunction 80

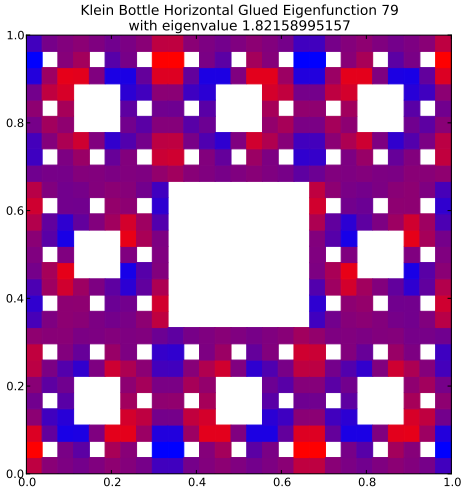
$M = 4$ Eigenfunction 80 has eigenvalue 0.321130082776





Compare to $m = 3$ eigenspace with eigenvalue 1.82158995157

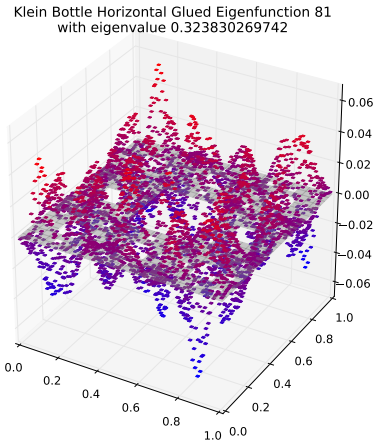


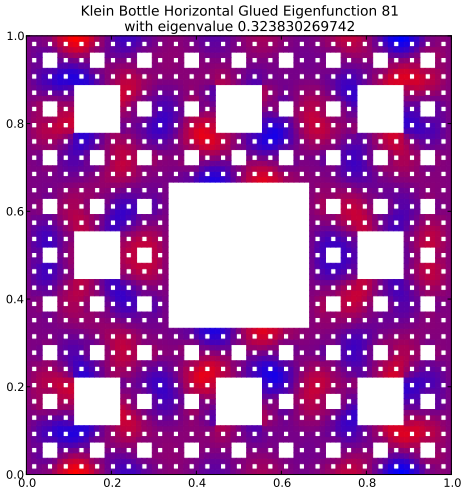


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.176291092569$
Dot Value: 0.018361577116722927

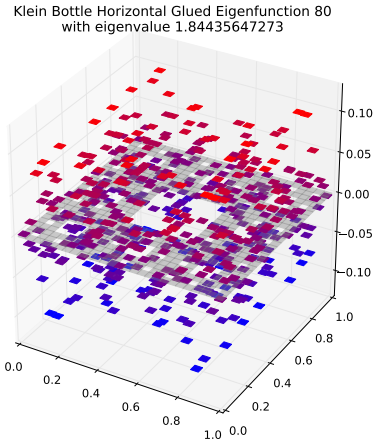
82 $M = 4$ Eigenfunction 81

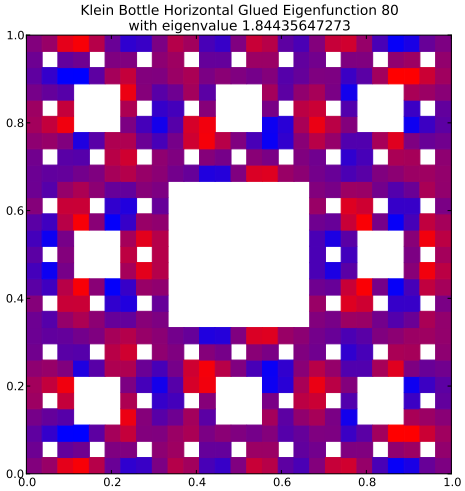
$M = 4$ Eigenfunction 81 has eigenvalue 0.323830269742





Compare to $m = 3$ eigenspace with eigenvalue 1.84435647273

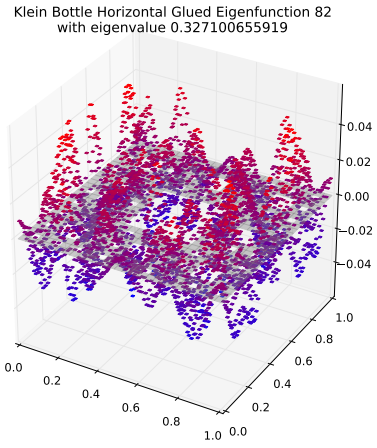


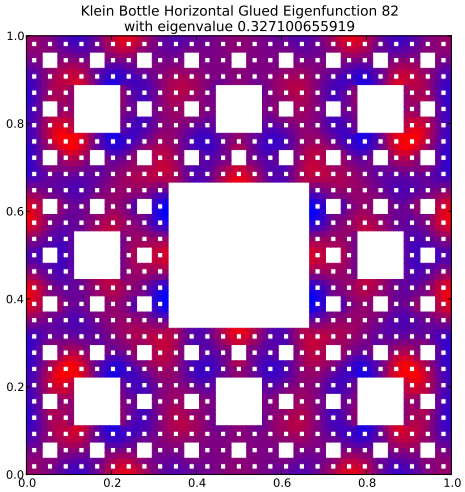


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.175579002503$
Dot Value: 0.044373795639841784

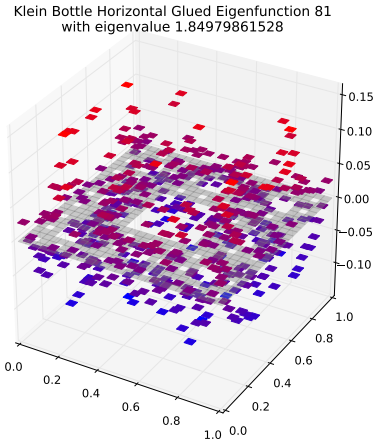
83 $M = 4$ Eigenfunction 82

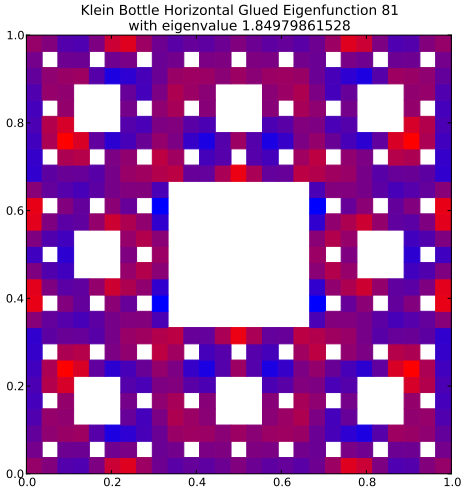
$M = 4$ Eigenfunction 82 has eigenvalue 0.327100655919





Compare to $m = 3$ eigenspace with eigenvalue 1.84979861528

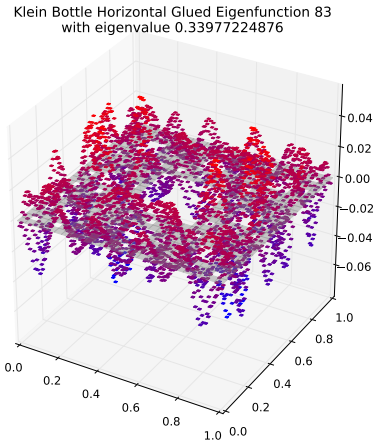


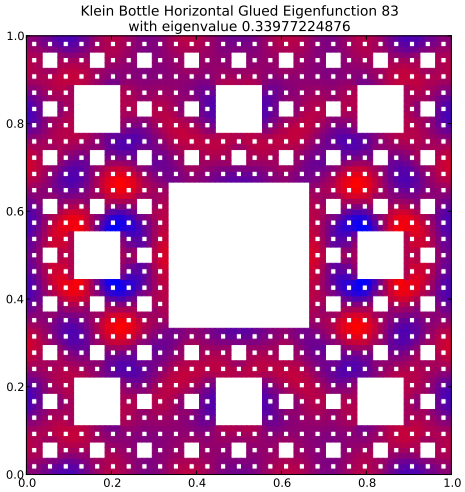


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.17683041452$
Dot Value: 0.04855499504909433

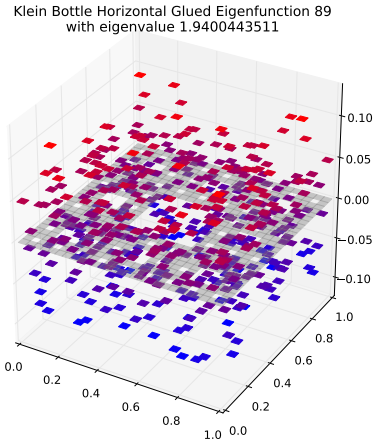
84 $M = 4$ Eigenfunction 83

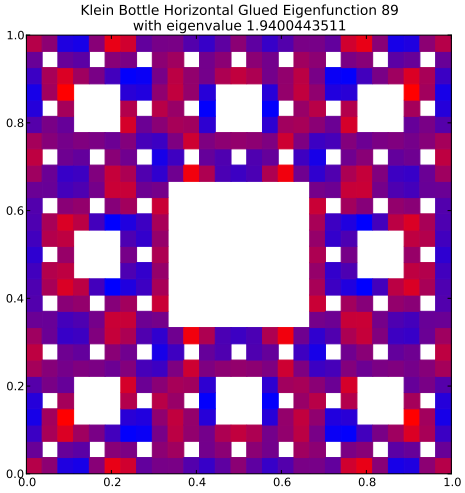
$M = 4$ Eigenfunction 83 has eigenvalue 0.33977224876





Compare to $m = 3$ eigenspace with eigenvalue 1.9400443511

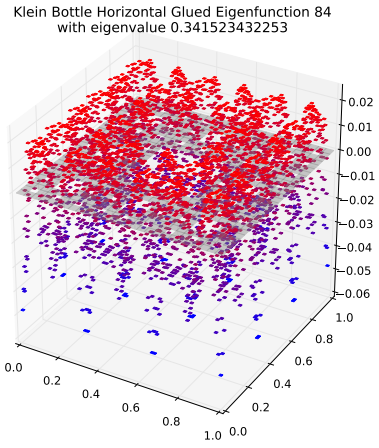


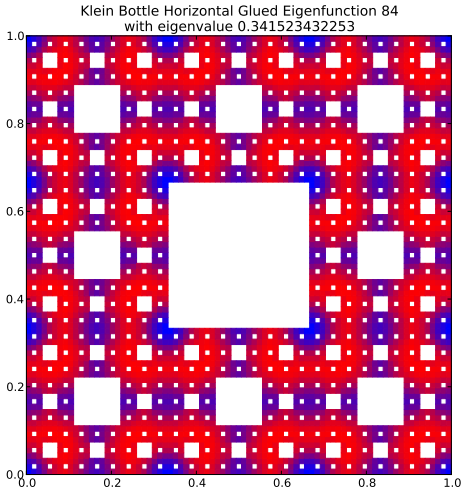


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.175136330552$
Dot Value: 0.3421299756460835

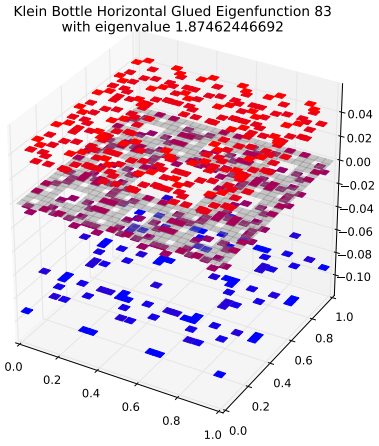
85 $M = 4$ Eigenfunction 84

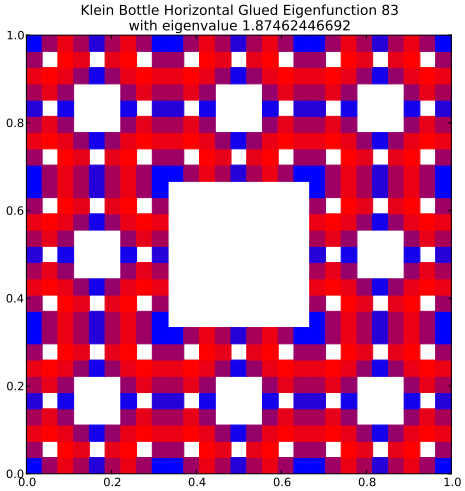
$M = 4$ Eigenfunction 84 has eigenvalue 0.341523432253





Compare to $m = 3$ eigenspace with eigenvalue 1.87462446692

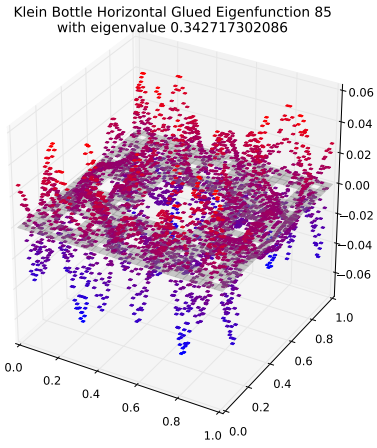


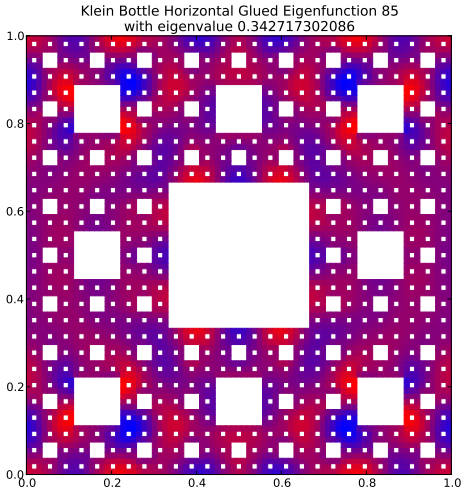


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182182318795$
Dot Value: 0.024030335828704175

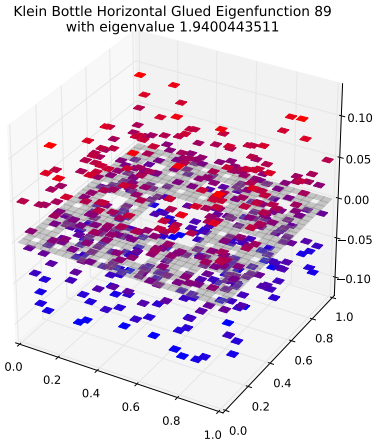
86 $M = 4$ Eigenfunction 85

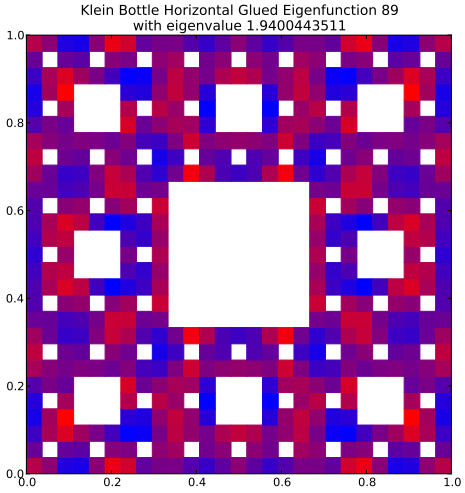
$M = 4$ Eigenfunction 85 has eigenvalue 0.342717302086





Compare to $m = 3$ eigenspace with eigenvalue 1.9400443511

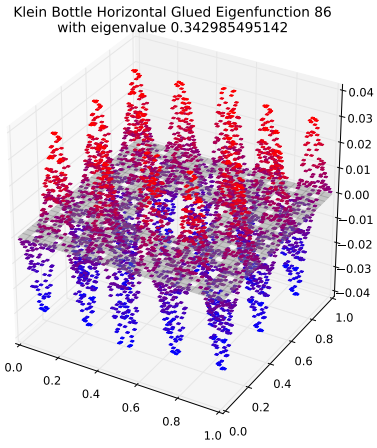


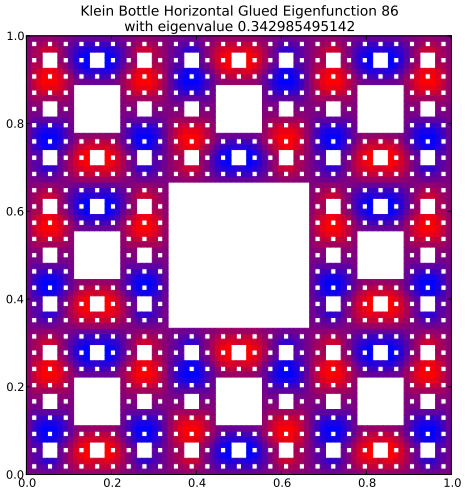


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.176654364573$
Dot Value: 0.32043396157780113

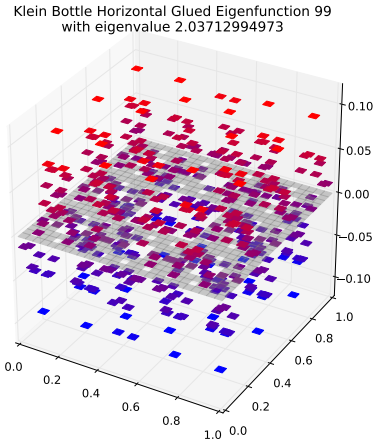
87 $M = 4$ Eigenfunction 86

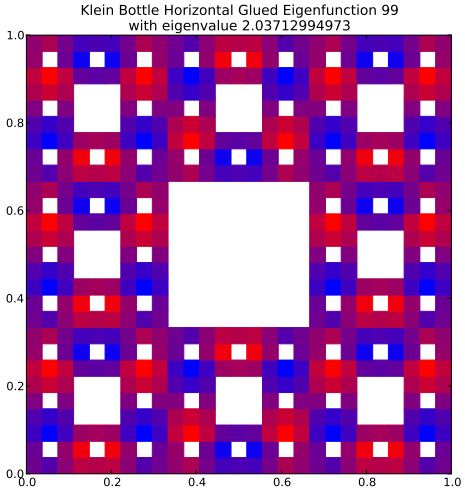
$M = 4$ Eigenfunction 86 has eigenvalue 0.342985495142





Compare to $m = 3$ eigenspace with eigenvalue 2.03712994973

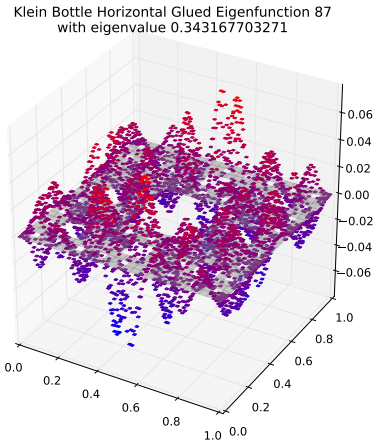


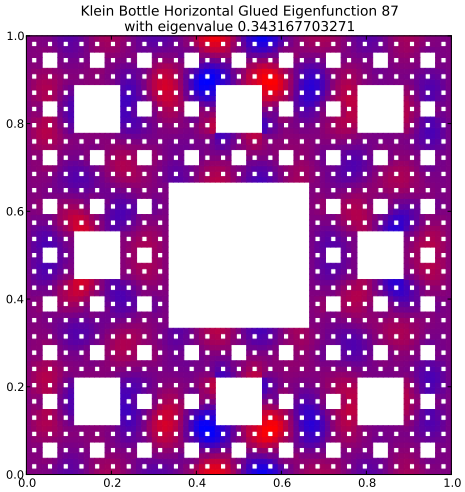


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.168367018111$
Dot Value: 0.01103789748348516

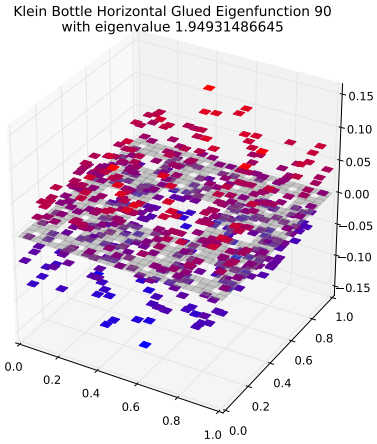
88 $M = 4$ Eigenfunction 87

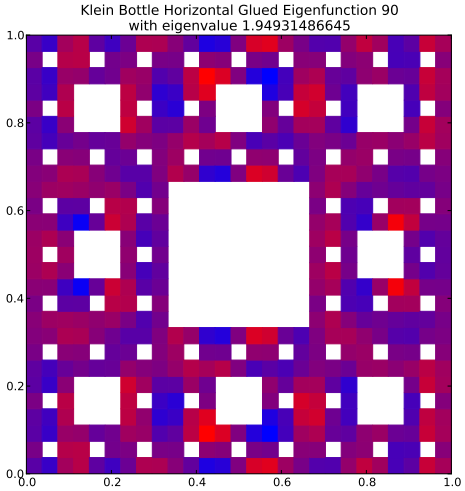
$M = 4$ Eigenfunction 87 has eigenvalue 0.343167703271





Compare to $m = 3$ eigenspace with eigenvalue 1.94931486645

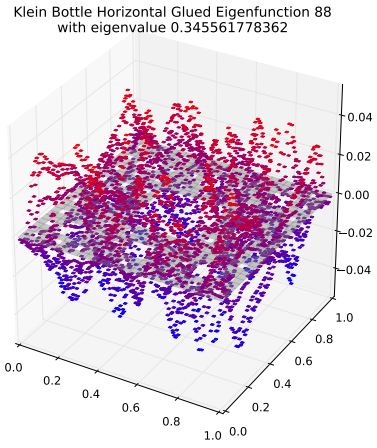


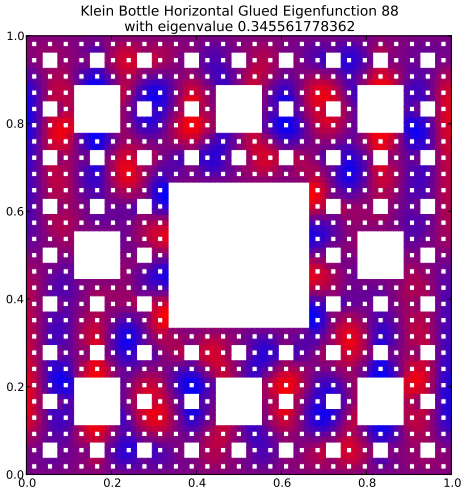


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.176045291182$
Dot Value: 0.0981719257691539

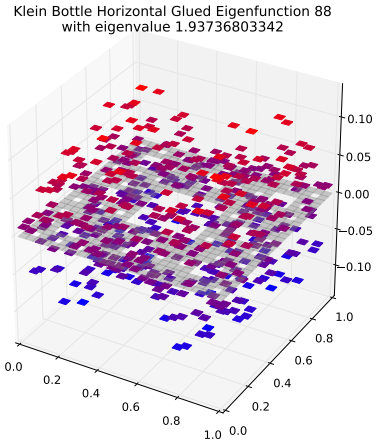
89 $M = 4$ Eigenfunction 88

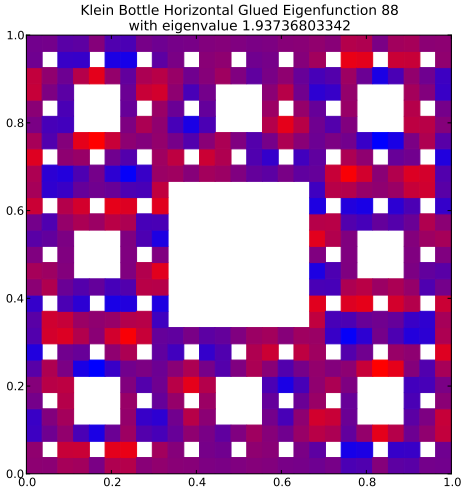
$M = 4$ Eigenfunction 88 has eigenvalue 0.345561778362





Compare to $m = 3$ eigenspace with eigenvalue 1.93736803342

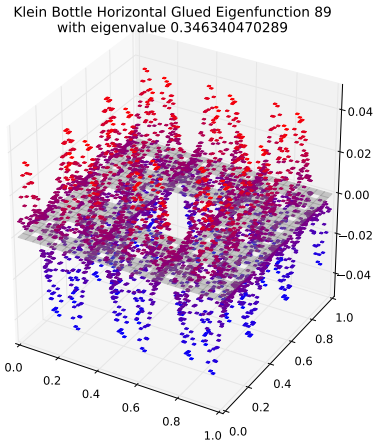


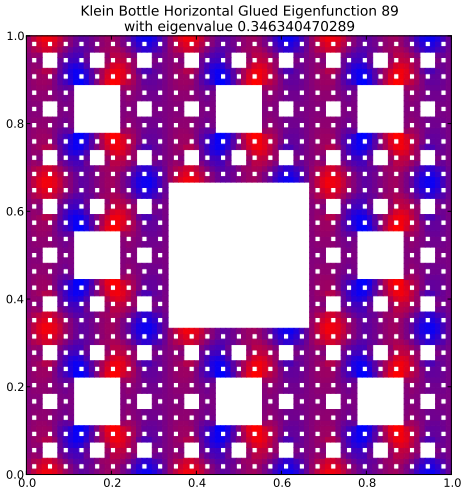


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.178366615119$
Dot Value: 0.24674131485559392

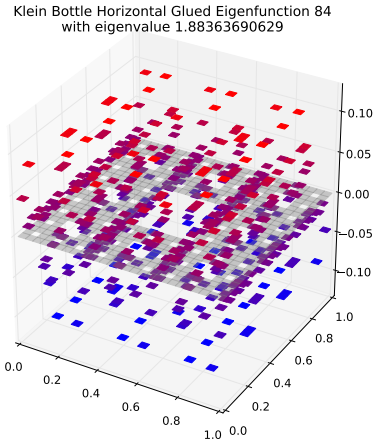
90 $M = 4$ Eigenfunction 89

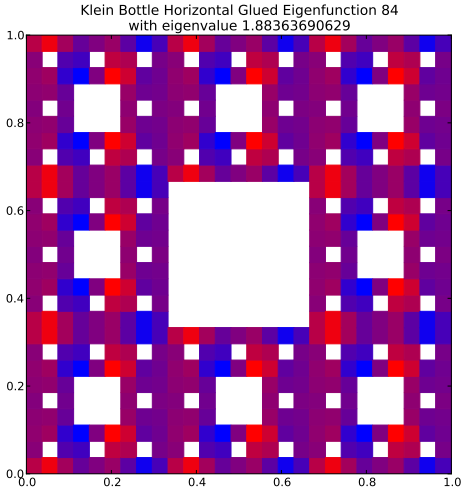
$M = 4$ Eigenfunction 89 has eigenvalue 0.346340470289





Compare to $m = 3$ eigenspace with eigenvalue 1.88363690629

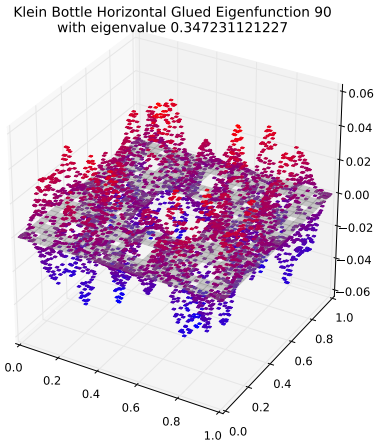


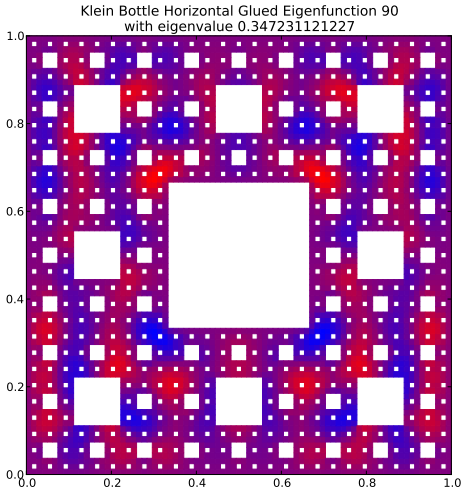


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.183867957318$
Dot Value: 0.004090726671721501

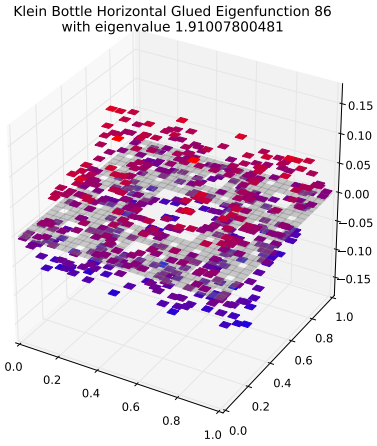
91 $M = 4$ Eigenfunction 90

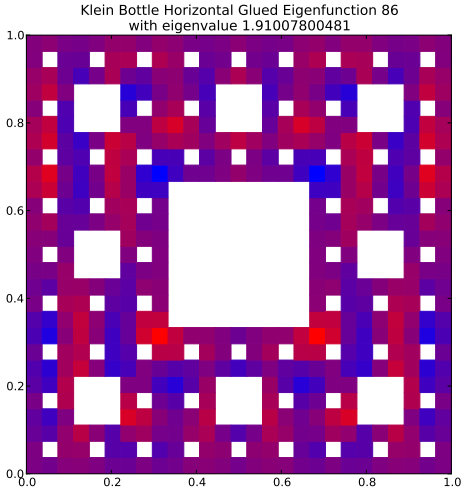
$M = 4$ Eigenfunction 90 has eigenvalue 0.347231121227





Compare to $m = 3$ eigenspace with eigenvalue 1.91007800481

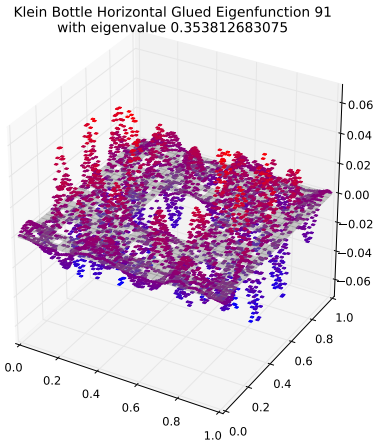


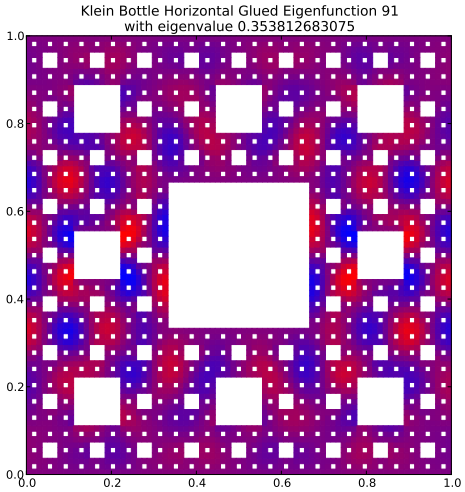


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.181788974247$
Dot Value: 0.04110424158684722

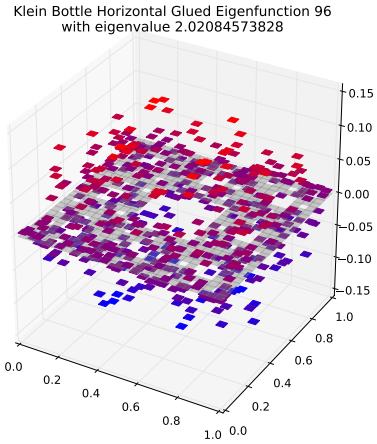
92 $M = 4$ Eigenfunction 91

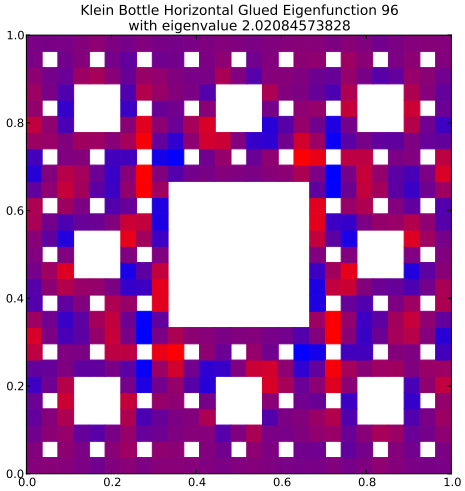
$M = 4$ Eigenfunction 91 has eigenvalue 0.353812683075





Compare to $m = 3$ eigenspace with eigenvalue 2.02084573828

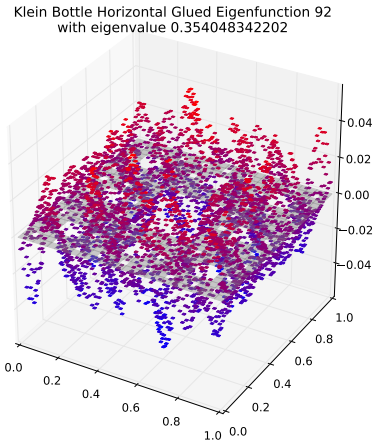


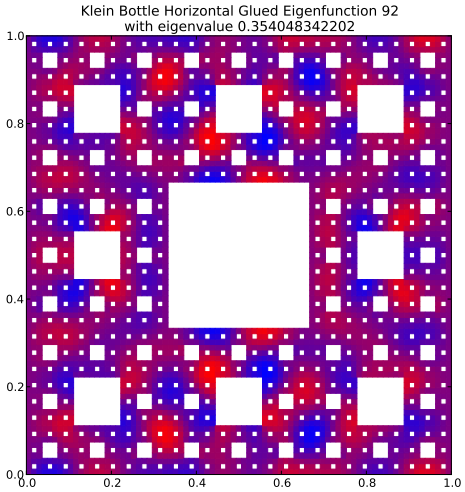


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.175081490077$
Dot Value: 0.28484481362550385

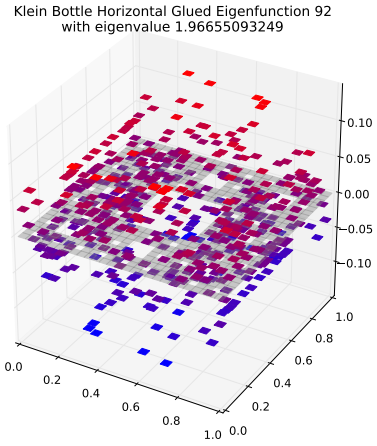
93 $M = 4$ Eigenfunction 92

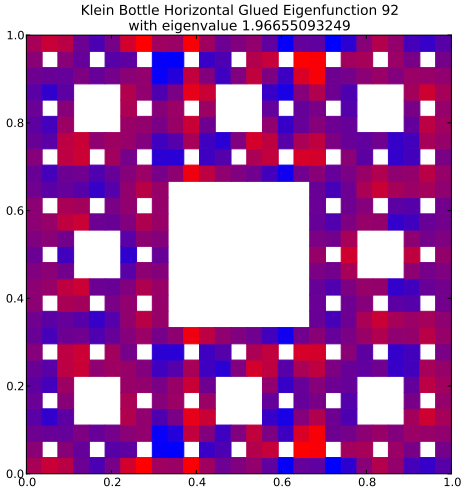
$M = 4$ Eigenfunction 92 has eigenvalue 0.354048342202





Compare to $m = 3$ eigenspace with eigenvalue 1.96655093249

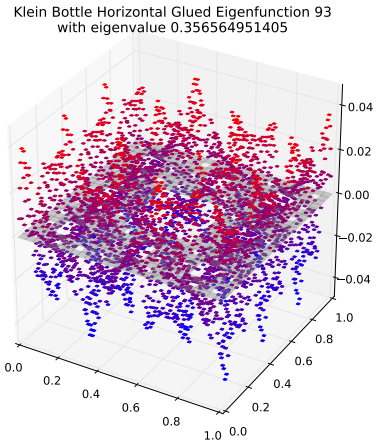


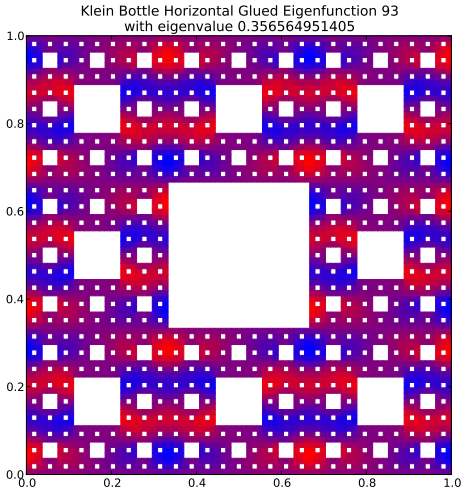


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.18003517547$
Dot Value: 0.3441244622751306

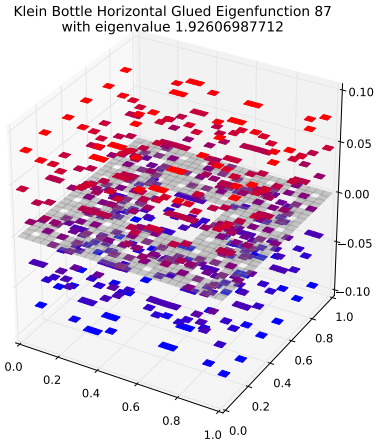
94 $M = 4$ Eigenfunction 93

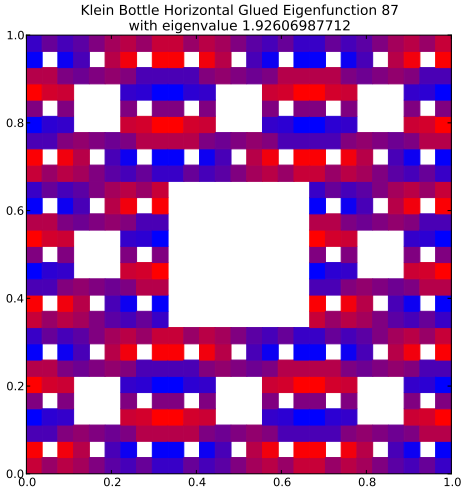
$M = 4$ Eigenfunction 93 has eigenvalue 0.356564951405





Compare to $m = 3$ eigenspace with eigenvalue 1.92606987712

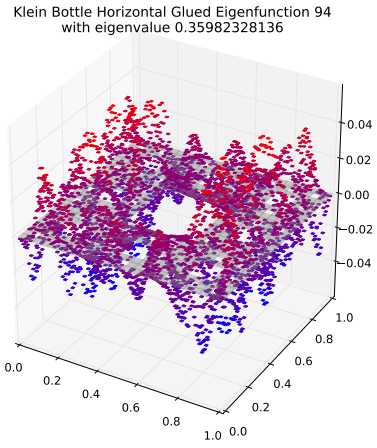


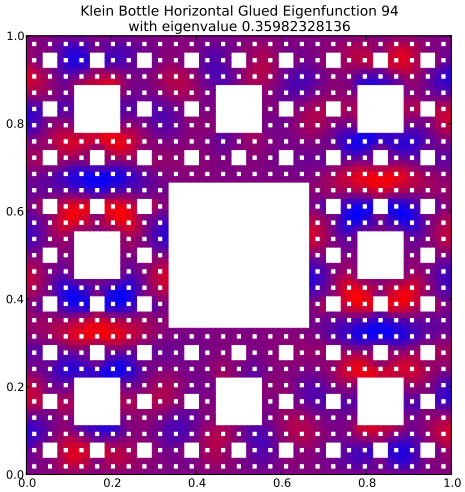


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.185125656987$
Dot Value: 0.08910903449333019

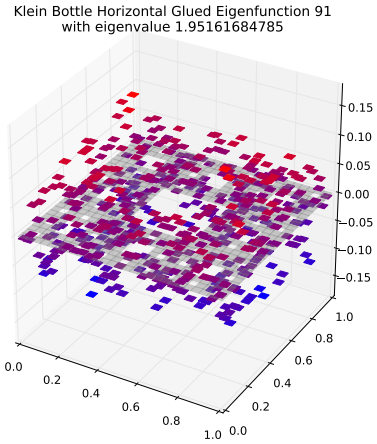
95 $M = 4$ Eigenfunction 94

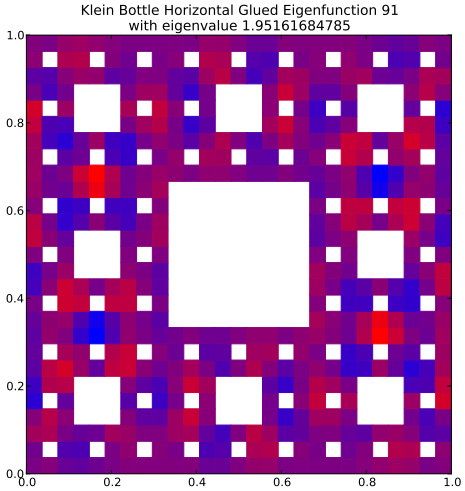
$M = 4$ Eigenfunction 94 has eigenvalue 0.35982328136





Compare to $m = 3$ eigenspace with eigenvalue 1.95161684785

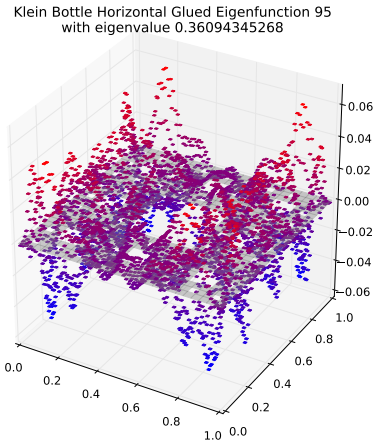


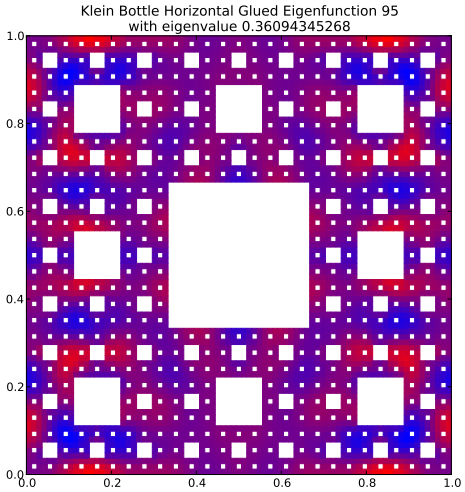


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.184371887216$
Dot Value: 0.2449612438515989

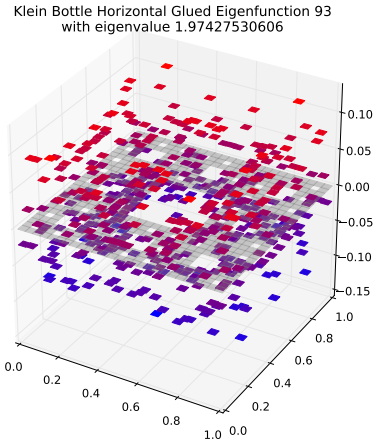
96 $M = 4$ Eigenfunction 95

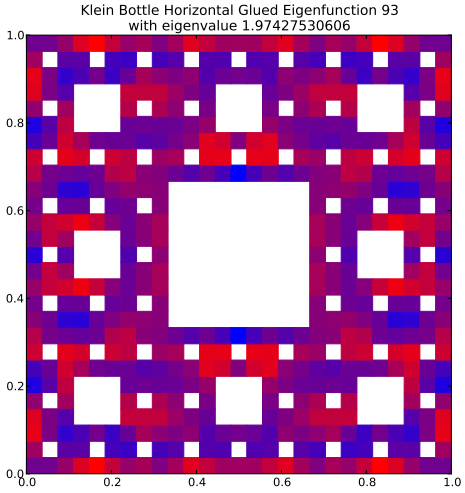
$M = 4$ Eigenfunction 95 has eigenvalue 0.36094345268





Compare to $m = 3$ eigenspace with eigenvalue 1.97427530606

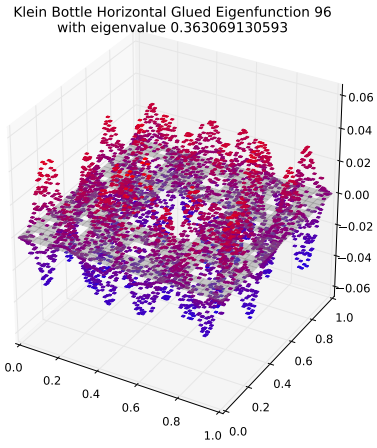


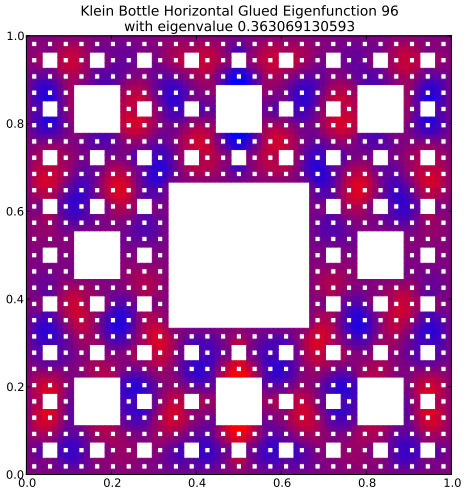


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182823262577$
Dot Value: 0.2203302444171792

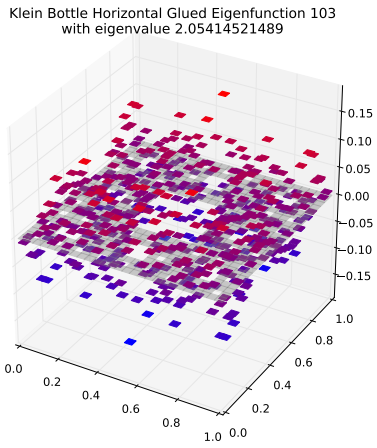
97 $M = 4$ Eigenfunction 96

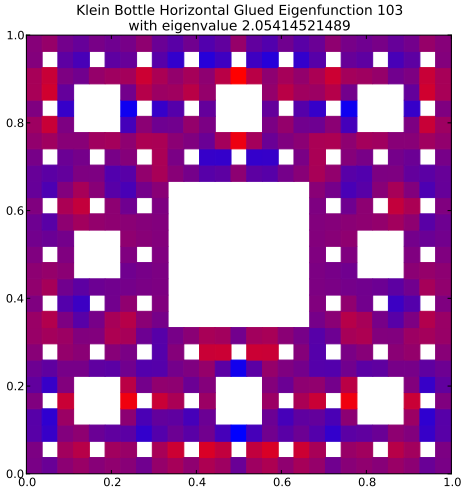
$M = 4$ Eigenfunction 96 has eigenvalue 0.363069130593





Compare to $m = 3$ eigenspace with eigenvalue 2.05414521489

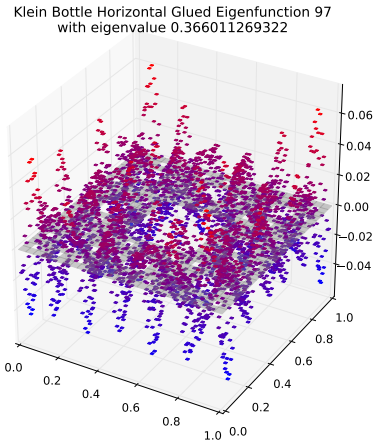


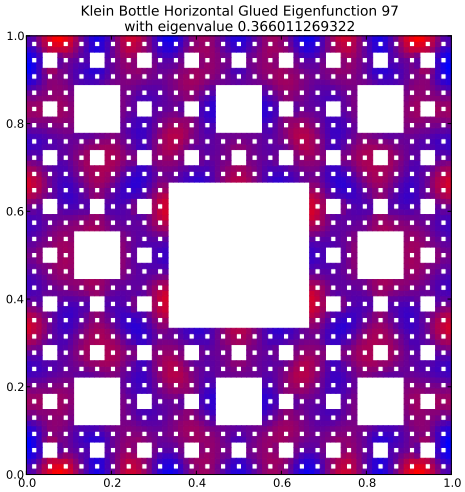


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.176749495586$
Dot Value: 0.3474261448747956

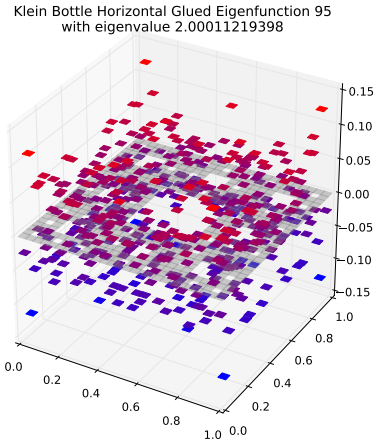
98 $M = 4$ Eigenfunction 97

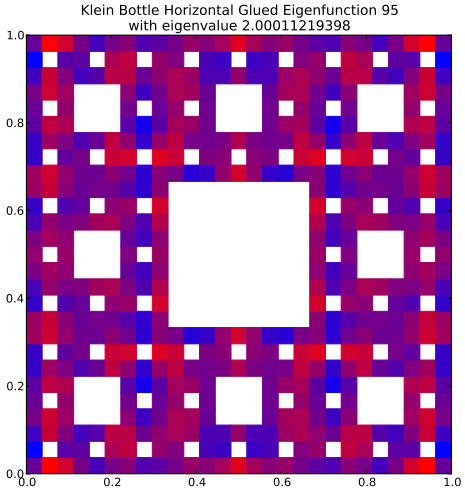
$M = 4$ Eigenfunction 97 has eigenvalue 0.366011269322





Compare to $m = 3$ eigenspace with eigenvalue 2.00011219398

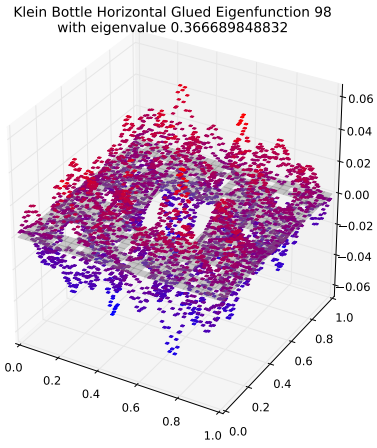


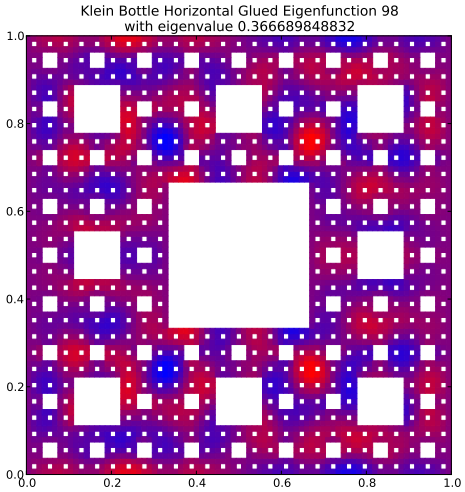


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182995369171$
Dot Value: 0.4136513933786279

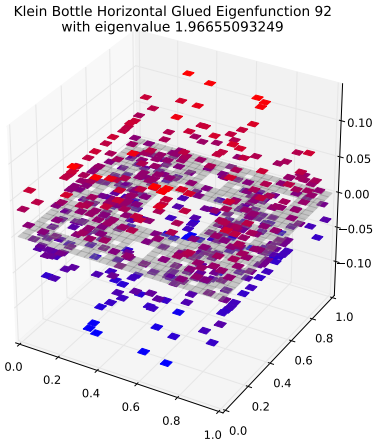
99 $M = 4$ Eigenfunction 98

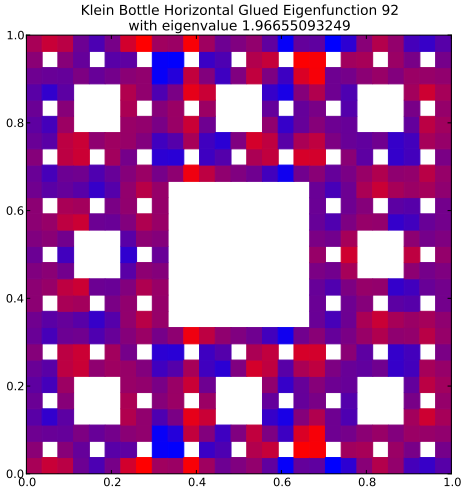
$M = 4$ Eigenfunction 98 has eigenvalue 0.366689848832





Compare to $m = 3$ eigenspace with eigenvalue 1.96655093249

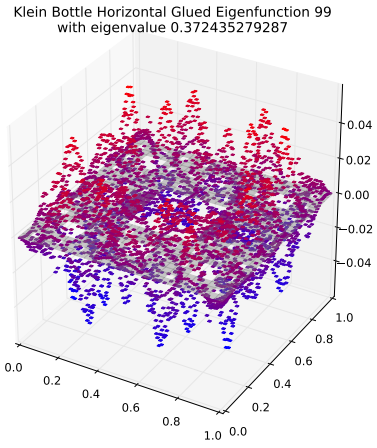


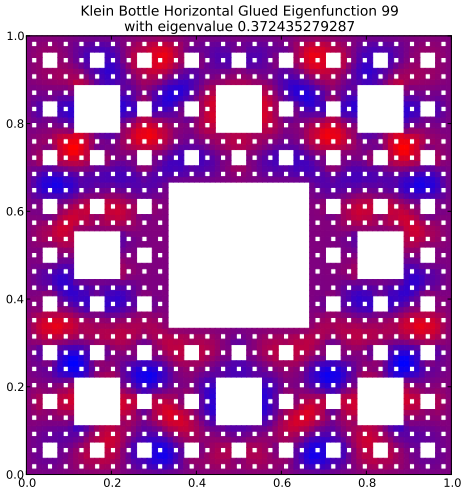


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.186463438487$
Dot Value: 0.3731918647324942

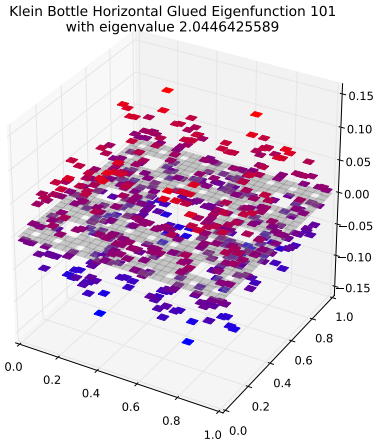
100 $M = 4$ Eigenfunction 99

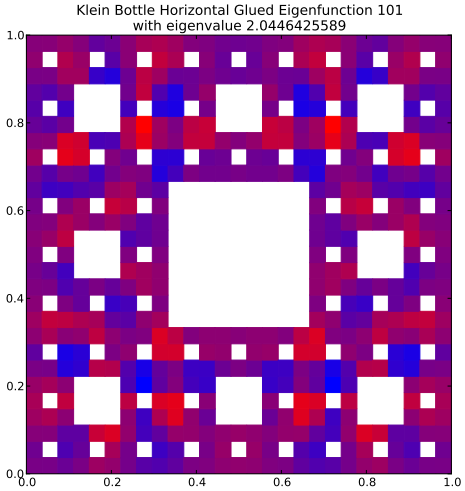
$M = 4$ Eigenfunction 99 has eigenvalue 0.372435279287





Compare to $m = 3$ eigenspace with eigenvalue 2.0446425589

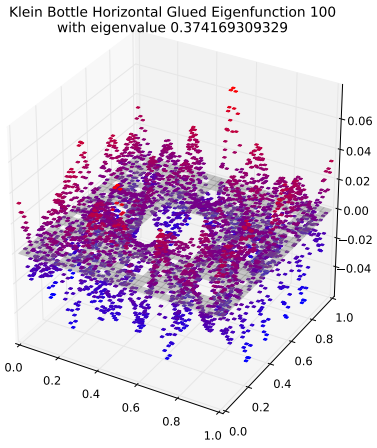


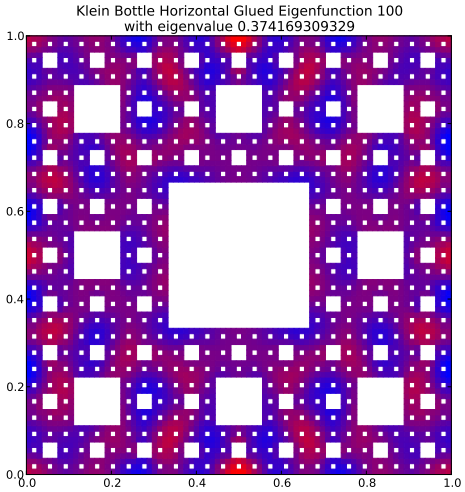


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182151778885$
Dot Value: 0.20462509071637736

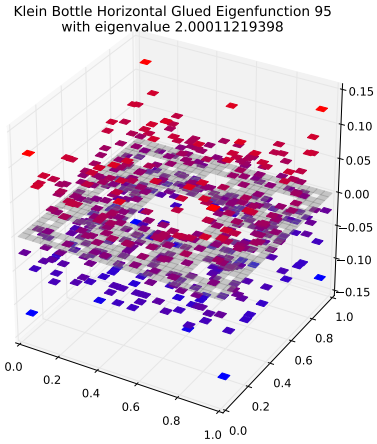
101 $M = 4$ Eigenfunction 100

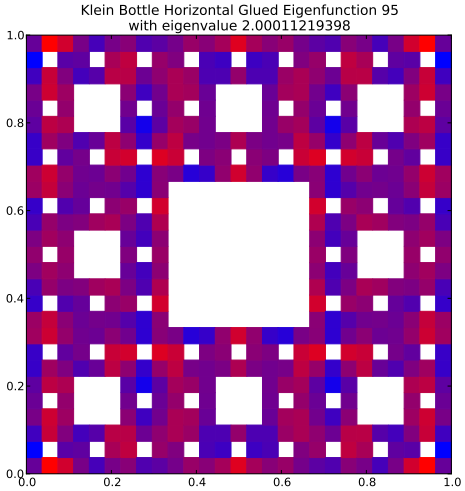
$M = 4$ Eigenfunction 100 has eigenvalue 0.374169309329





Compare to $m = 3$ eigenspace with eigenvalue 2.00011219398

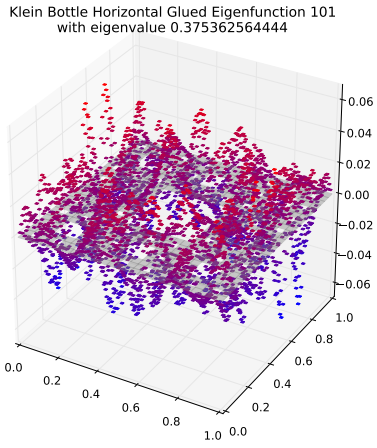


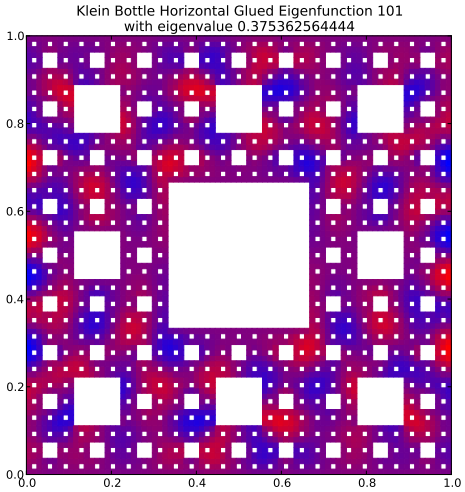


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.187074160367$
Dot Value: 0.4033191818868984

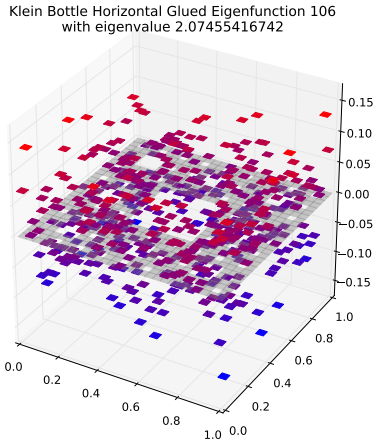
102 $M = 4$ Eigenfunction 101

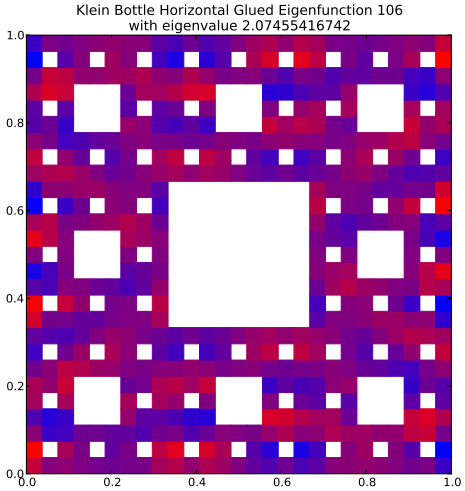
$M = 4$ Eigenfunction 101 has eigenvalue 0.375362564444





Compare to $m = 3$ eigenspace with eigenvalue 2.07455416742

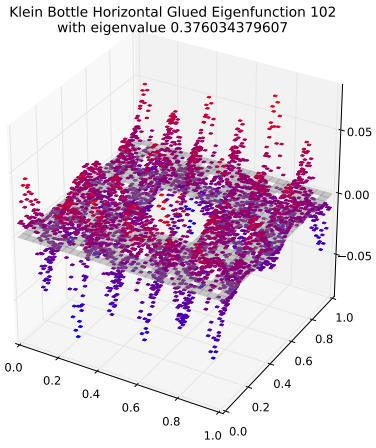


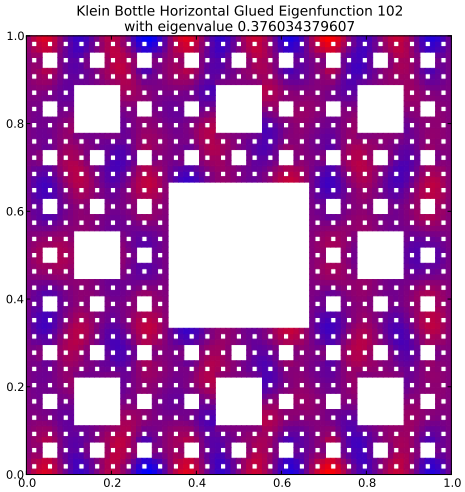


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.180936497267$
Dot Value: 0.3638725956850447

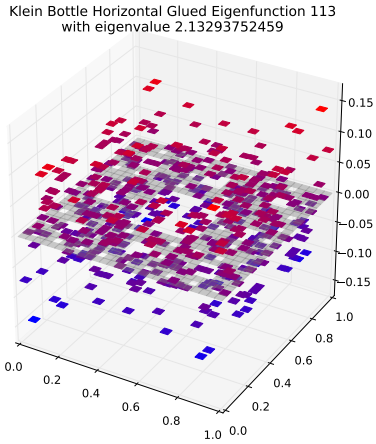
103 $M = 4$ Eigenfunction 102

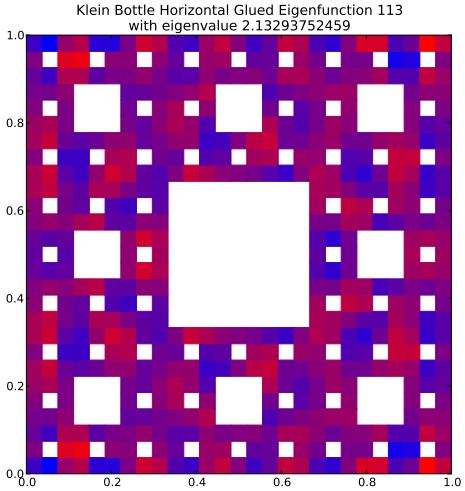
$M = 4$ Eigenfunction 102 has eigenvalue 0.376034379607





Compare to $m = 3$ eigenspace with eigenvalue 2.13293752459

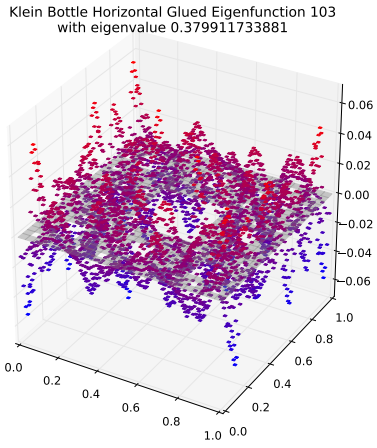


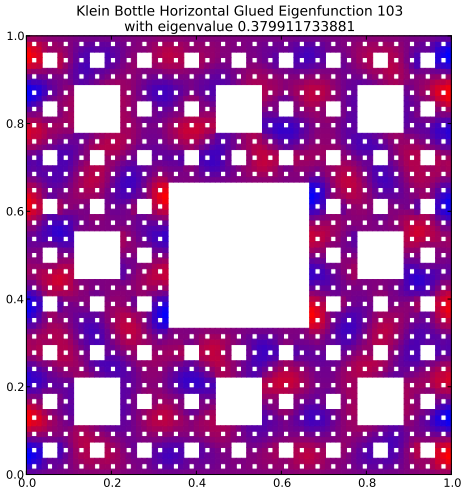


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.176298825105$
Dot Value: 0.2326854512680986

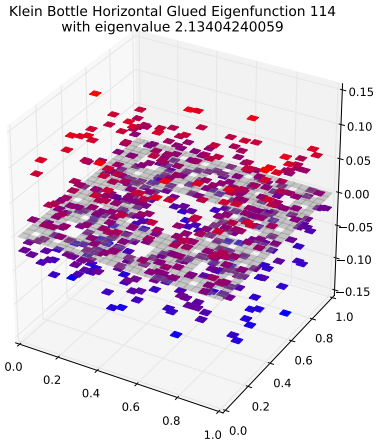
104 $M = 4$ Eigenfunction 103

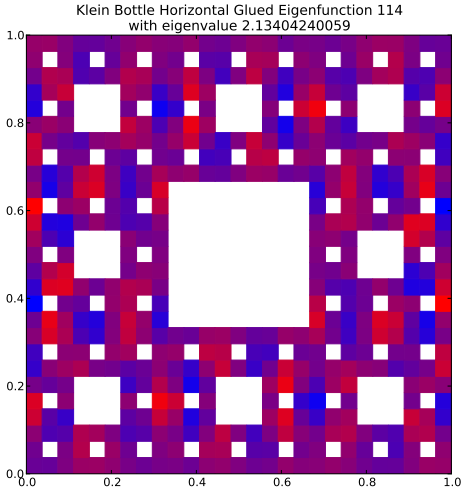
$M = 4$ Eigenfunction 103 has eigenvalue 0.379911733881





Compare to $m = 3$ eigenspace with eigenvalue 2.13404240059

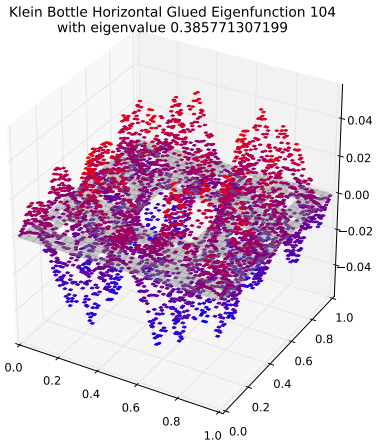


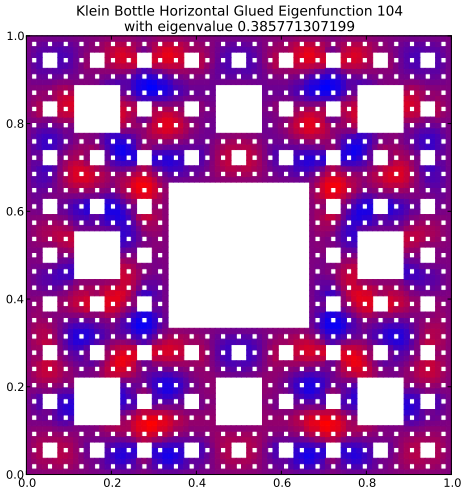


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.17802445433$
Dot Value: 0.34042488224620626

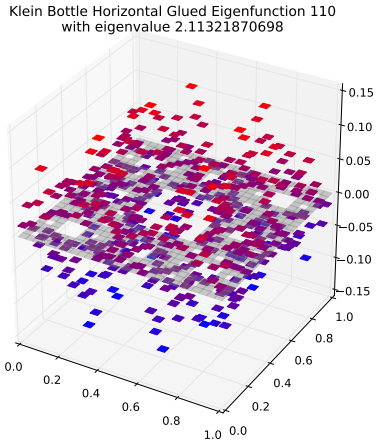
105 $M = 4$ Eigenfunction 104

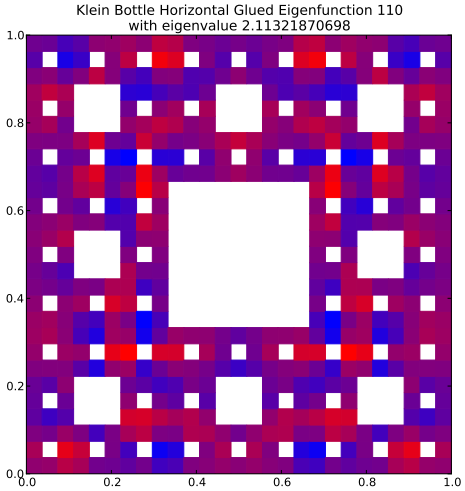
$M = 4$ Eigenfunction 104 has eigenvalue 0.385771307199





Compare to $m = 3$ eigenspace with eigenvalue 2.11321870698

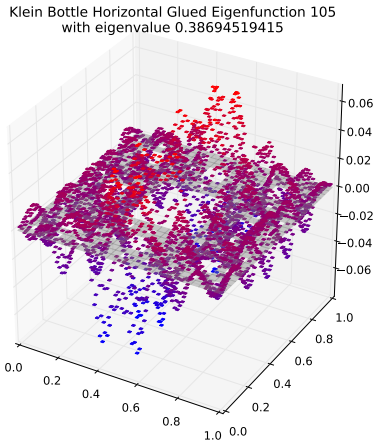


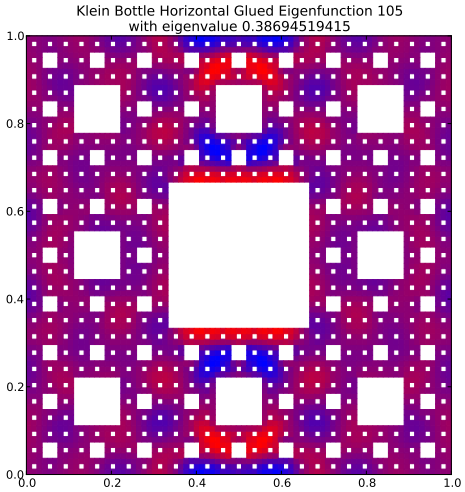


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182551529534$
Dot Value: 0.24939095695372715

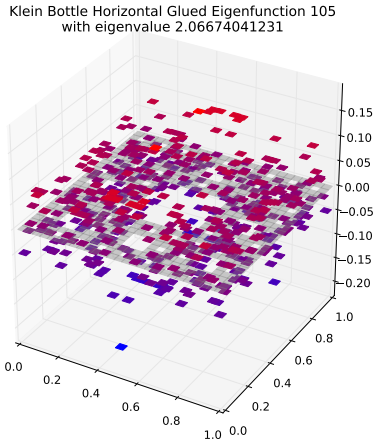
106 $M = 4$ Eigenfunction 105

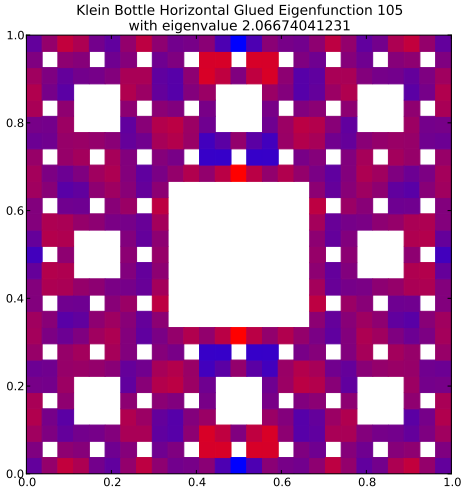
$M = 4$ Eigenfunction 105 has eigenvalue 0.38694519415





Compare to $m = 3$ eigenspace with eigenvalue 2.06674041231

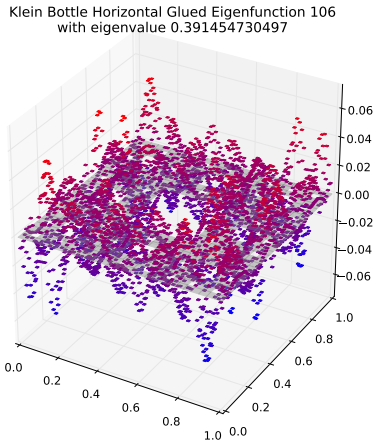


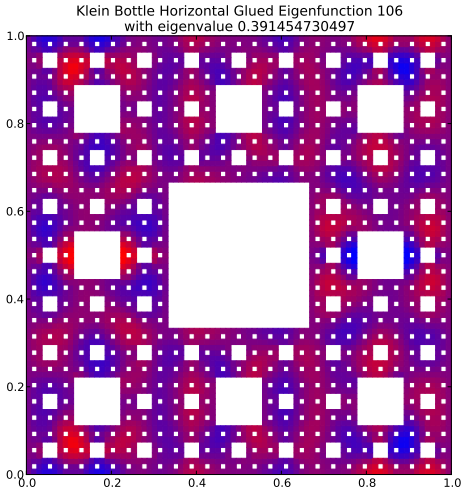


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.187224864742$
Dot Value: 0.3522026091531345

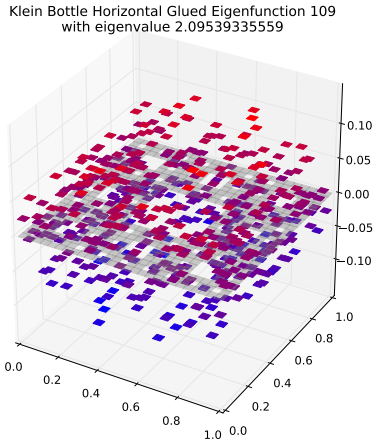
107 $M = 4$ Eigenfunction 106

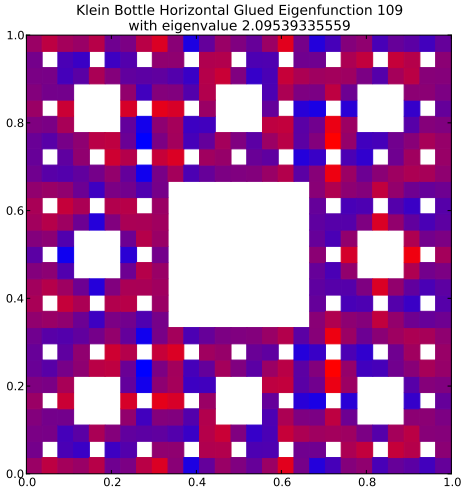
$M = 4$ Eigenfunction 106 has eigenvalue 0.391454730497





Compare to $m = 3$ eigenspace with eigenvalue 2.09539335559

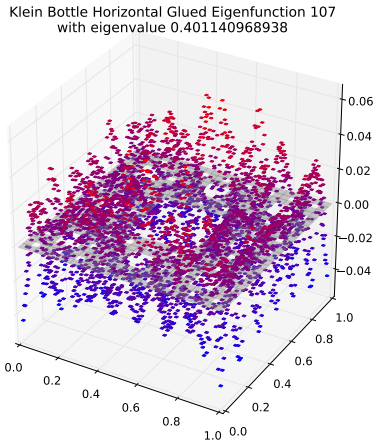


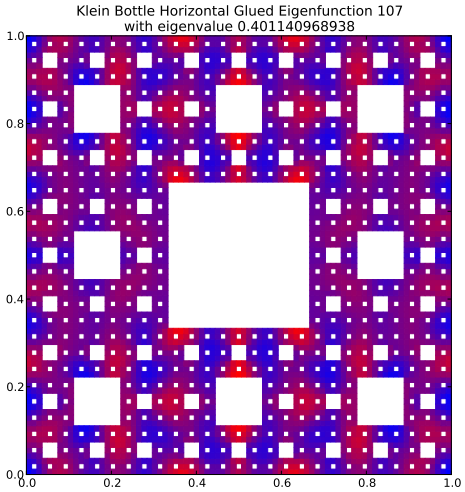


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.186816823416$
Dot Value: 0.3474186509182706

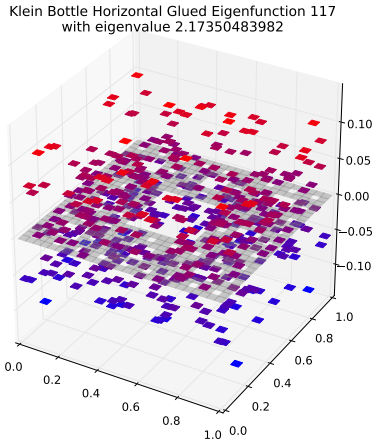
108 $M = 4$ Eigenfunction 107

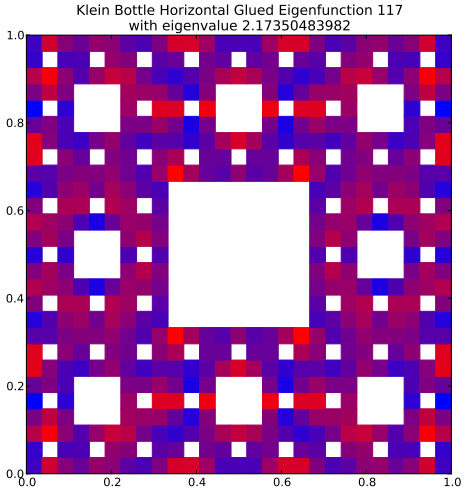
$M = 4$ Eigenfunction 107 has eigenvalue 0.401140968938





Compare to $m = 3$ eigenspace with eigenvalue 2.17350483982

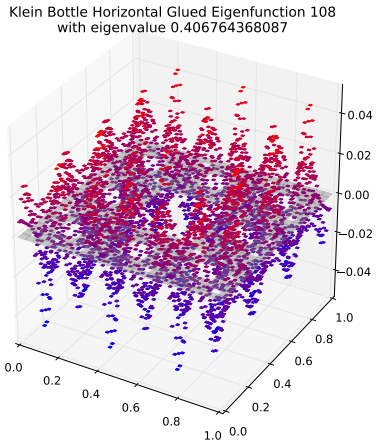


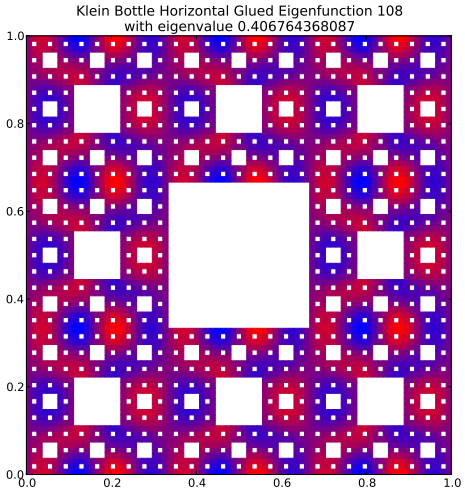


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.184559501129$
Dot Value: 0.3280523166060587

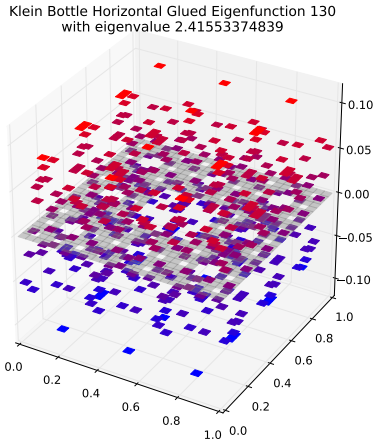
109 $M = 4$ Eigenfunction 108

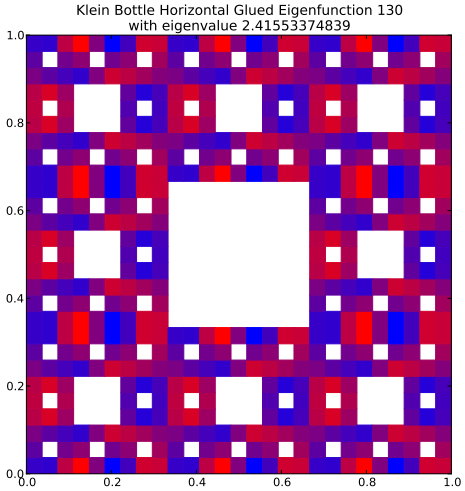
$M = 4$ Eigenfunction 108 has eigenvalue 0.406764368087





Compare to $m = 3$ eigenspace with eigenvalue 2.41553374839

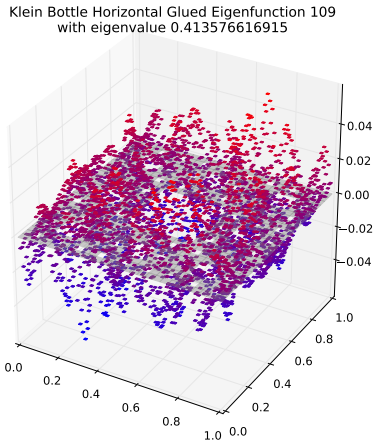


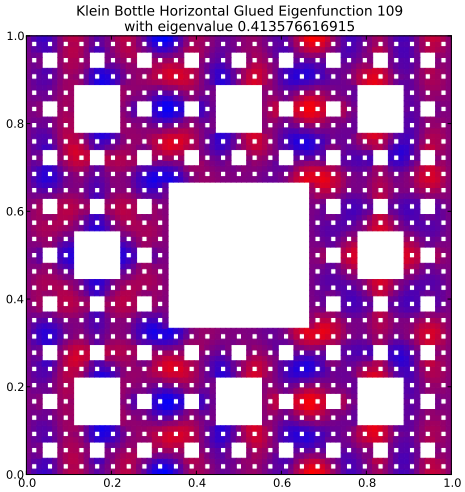


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.168395232879$
Dot Value: 0.0055144415318747475

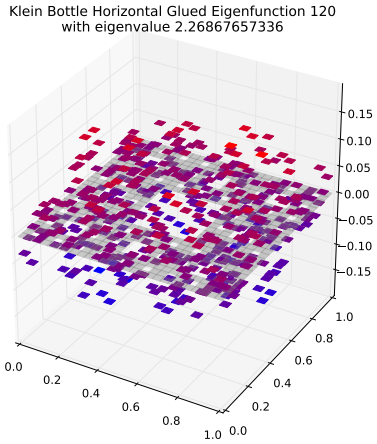
110 $M = 4$ Eigenfunction 109

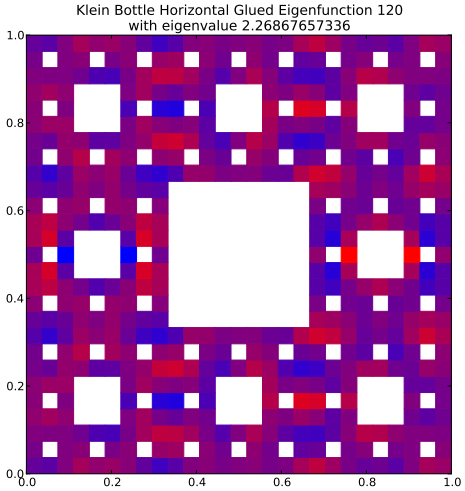
$M = 4$ Eigenfunction 109 has eigenvalue 0.413576616915





Compare to $m = 3$ eigenspace with eigenvalue 2.26867657336

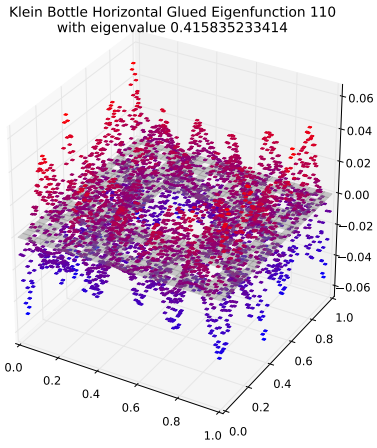


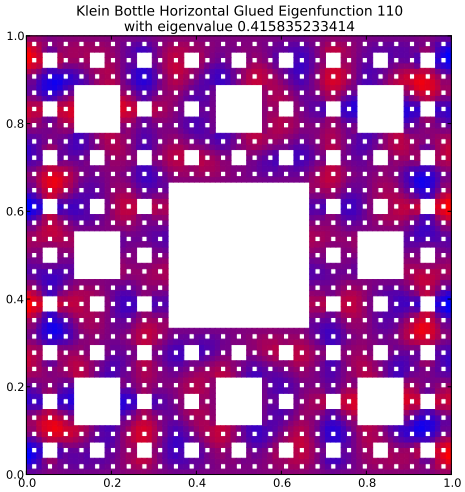


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182298623687$
Dot Value: 0.17559532144865353

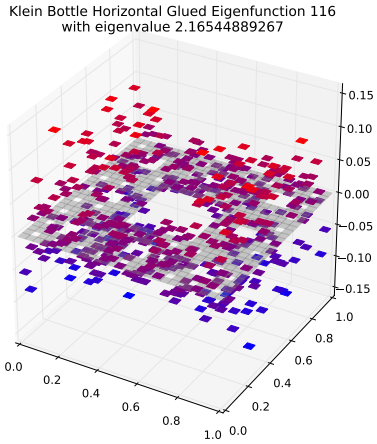
111 $M = 4$ Eigenfunction 110

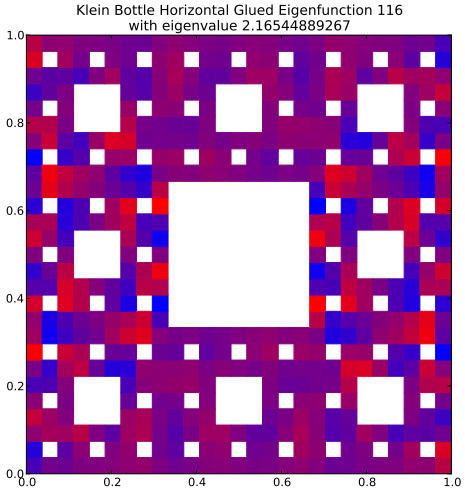
$M = 4$ Eigenfunction 110 has eigenvalue 0.415835233414





Compare to $m = 3$ eigenspace with eigenvalue 2.16544889267

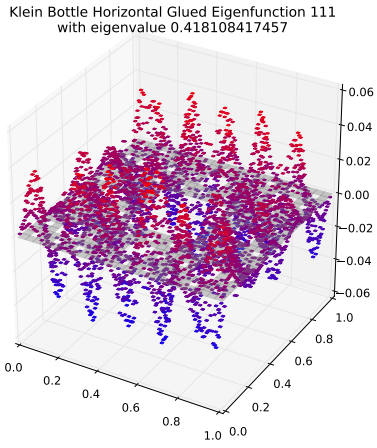


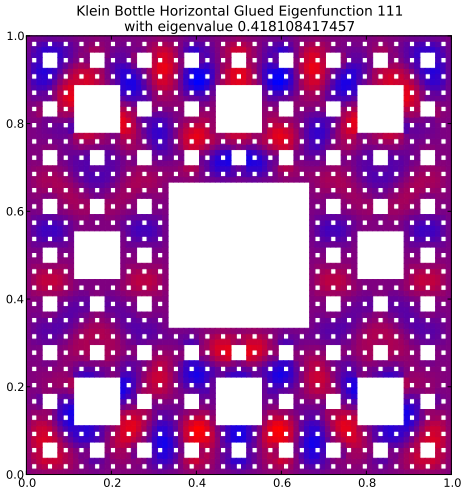


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.192031885316$
Dot Value: 0.35347902531853903

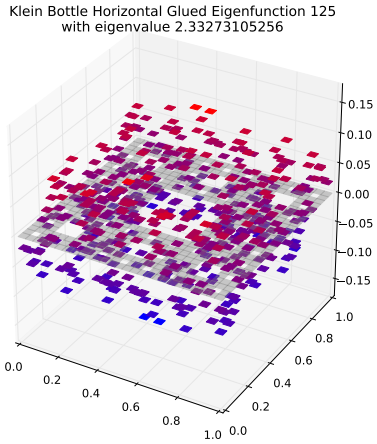
112 $M = 4$ Eigenfunction 111

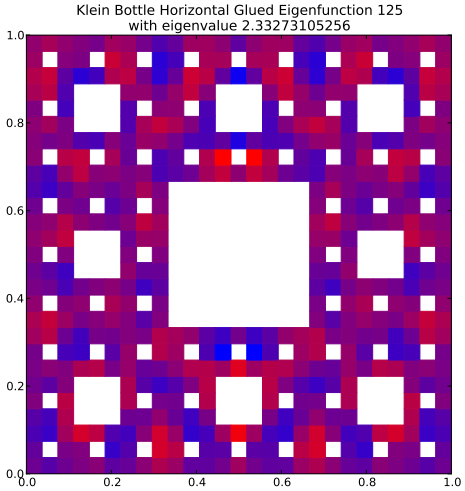
$M = 4$ Eigenfunction 111 has eigenvalue 0.418108417457





Compare to $m = 3$ eigenspace with eigenvalue 2.33273105256

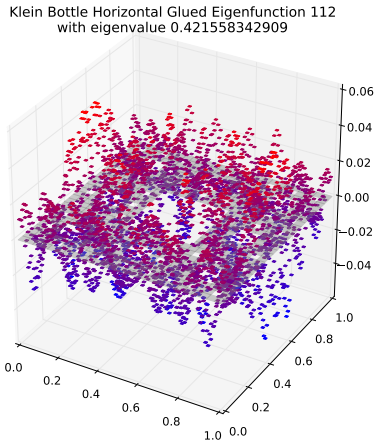


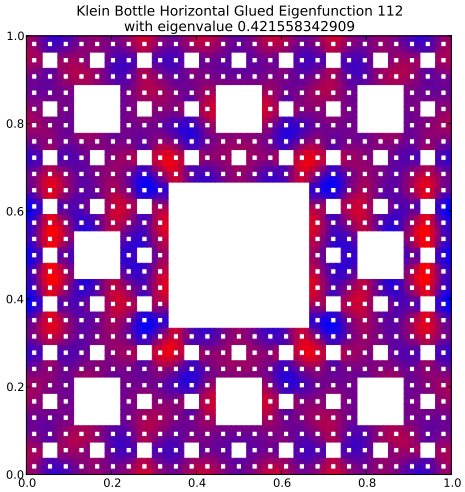


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.179235586116$
Dot Value: 0.19844300693779404

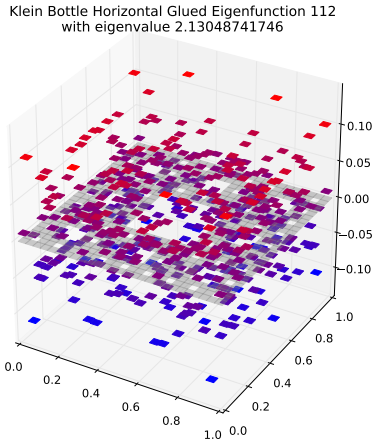
113 $M = 4$ Eigenfunction 112

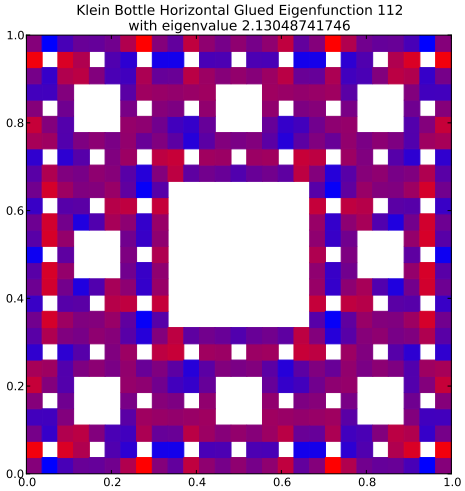
$M = 4$ Eigenfunction 112 has eigenvalue 0.421558342909





Compare to $m = 3$ eigenspace with eigenvalue 2.13048741746

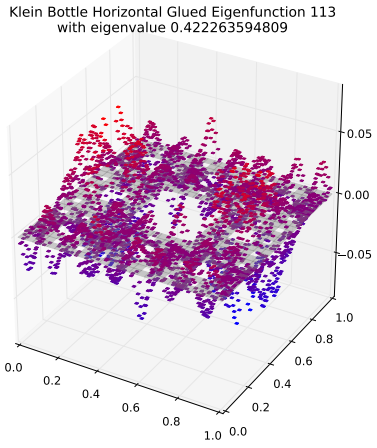


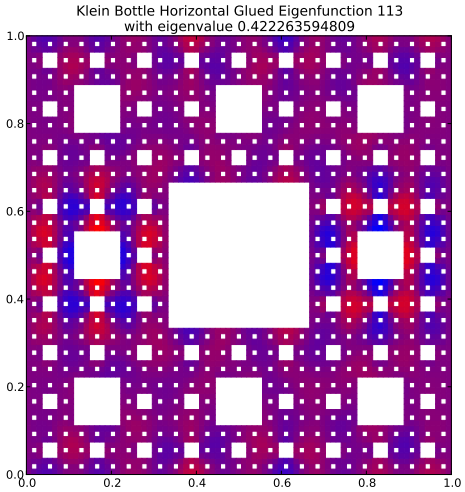


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.19786943563$
Dot Value: 0.17792642038691586

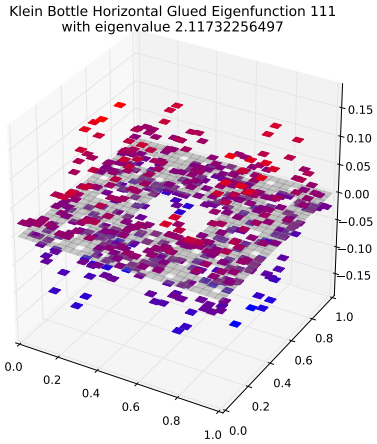
114 $M = 4$ Eigenfunction 113

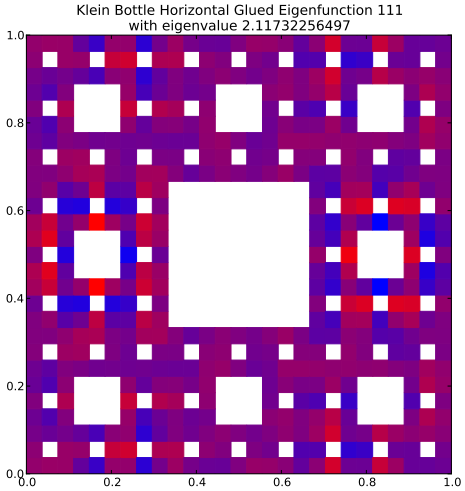
$M = 4$ Eigenfunction 113 has eigenvalue 0.422263594809





Compare to $m = 3$ eigenspace with eigenvalue 2.11732256497

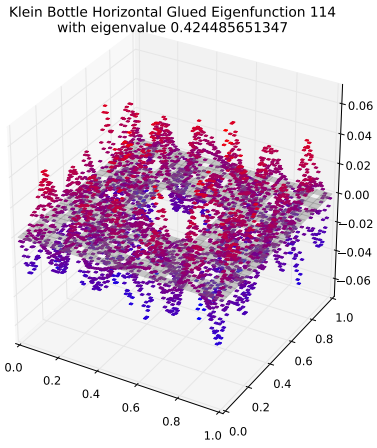


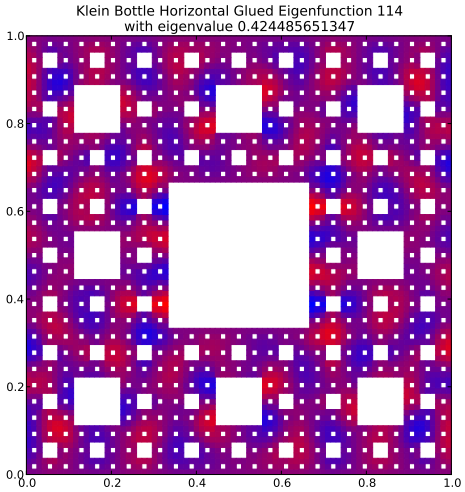


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.199432812834$
Dot Value: 0.38292949354950345

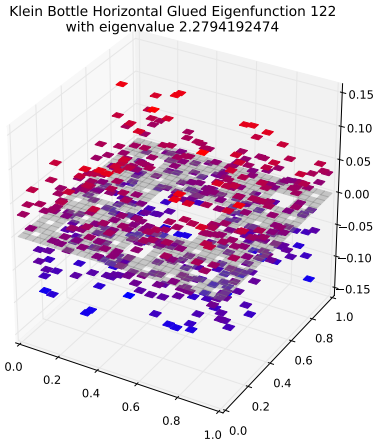
115 $M = 4$ Eigenfunction 114

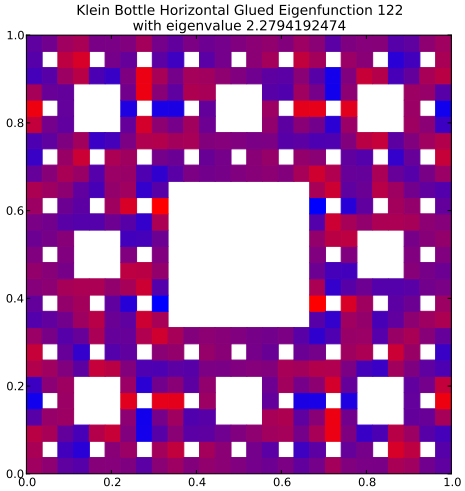
$M = 4$ Eigenfunction 114 has eigenvalue 0.424485651347





Compare to $m = 3$ eigenspace with eigenvalue 2.2794192474

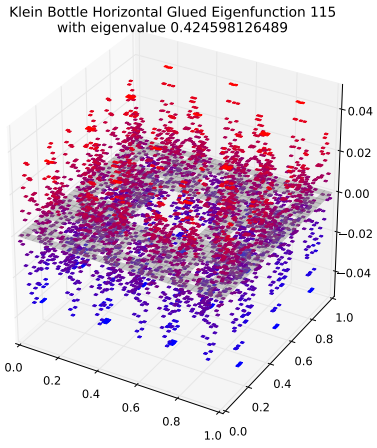


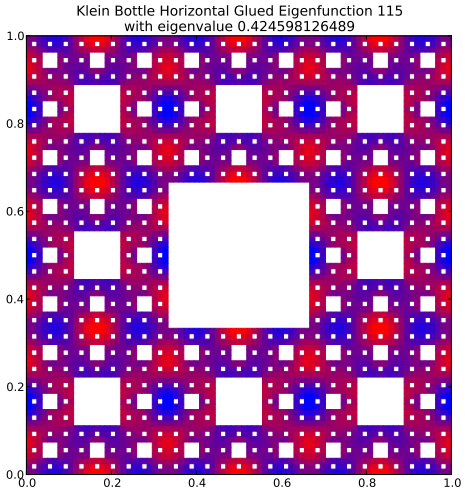


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.186225351844$
Dot Value: 0.5054651934403257

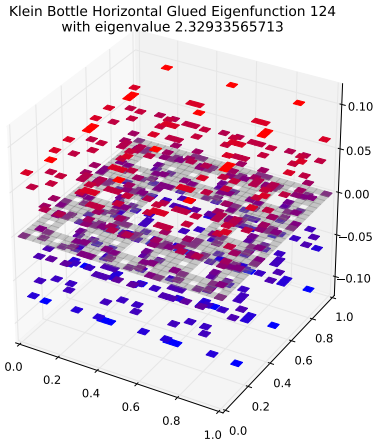
116 $M = 4$ Eigenfunction 115

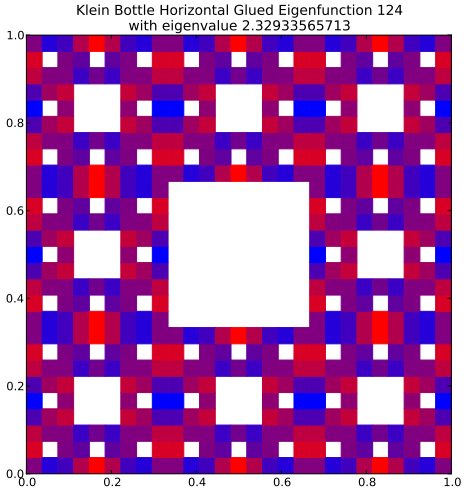
$M = 4$ Eigenfunction 115 has eigenvalue 0.424598126489





Compare to $m = 3$ eigenspace with eigenvalue 2.32933565713

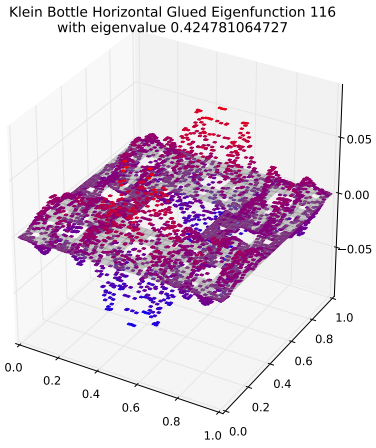


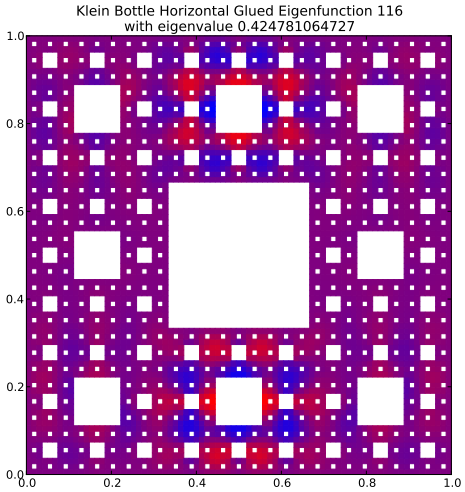


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182282929122$
Dot Value: 0.0133376468314209 13

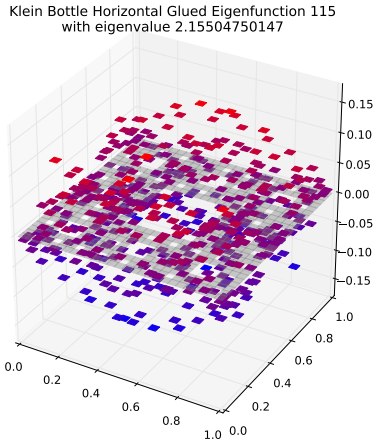
117 $M = 4$ Eigenfunction 116

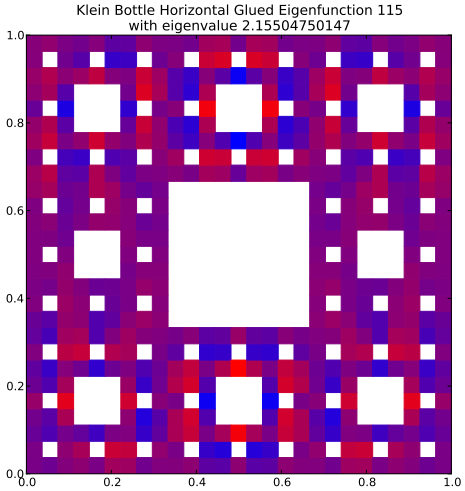
$M = 4$ Eigenfunction 116 has eigenvalue 0.424781064727





Compare to $m = 3$ eigenspace with eigenvalue 2.15504750147

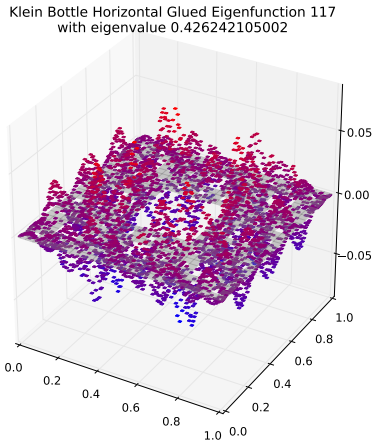


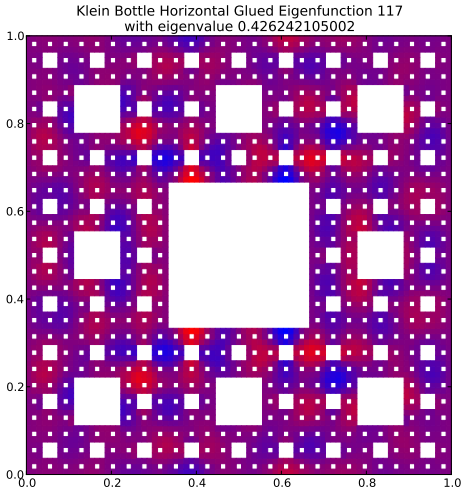


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.197109838385$
Dot Value: 0.2278496024277239

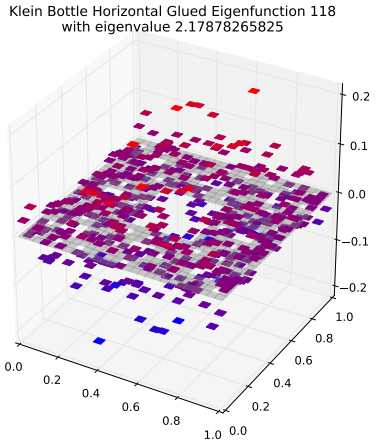
118 $M = 4$ Eigenfunction 117

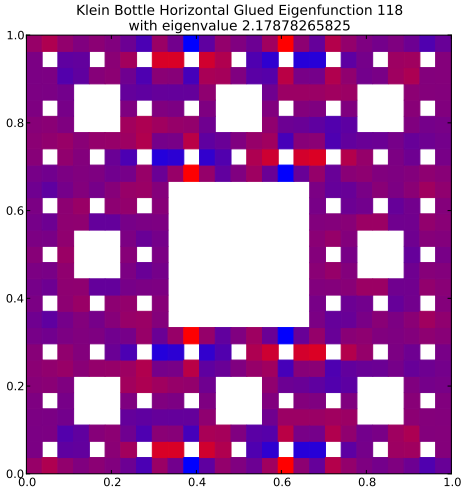
$M = 4$ Eigenfunction 117 has eigenvalue 0.426242105002





Compare to $m = 3$ eigenspace with eigenvalue 2.17878265825

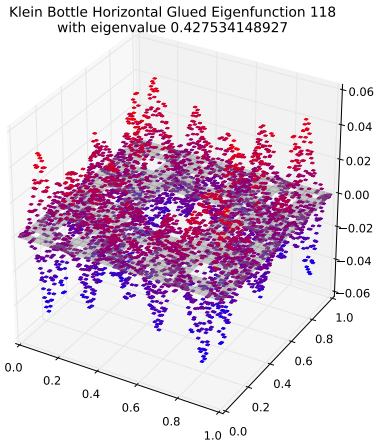


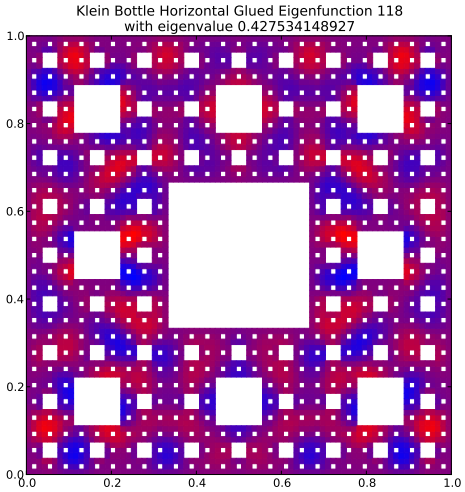


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.195633145595$
Dot Value: 0.32072783433043106

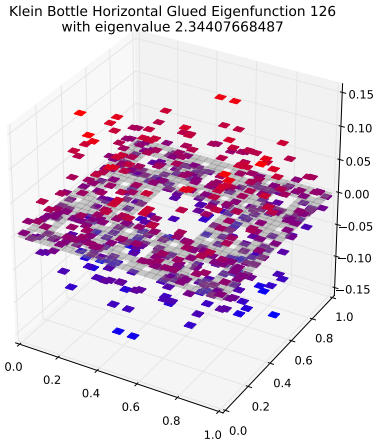
119 $M = 4$ Eigenfunction 118

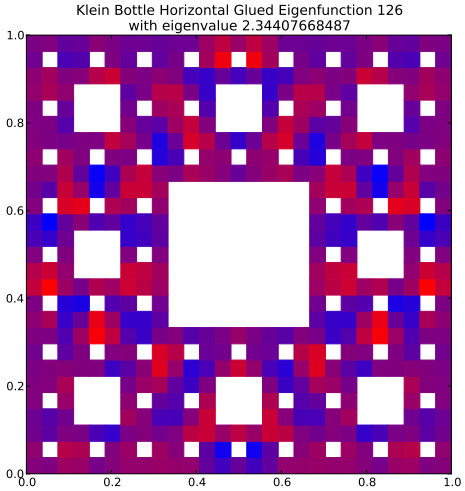
$M = 4$ Eigenfunction 118 has eigenvalue 0.427534148927





Compare to $m = 3$ eigenspace with eigenvalue 2.34407668487

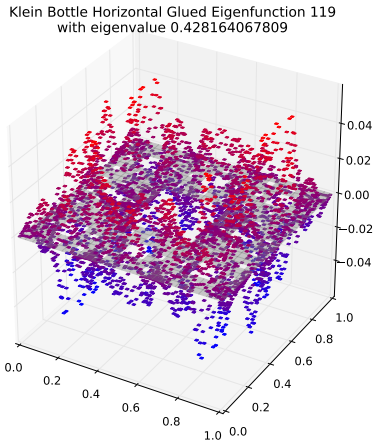


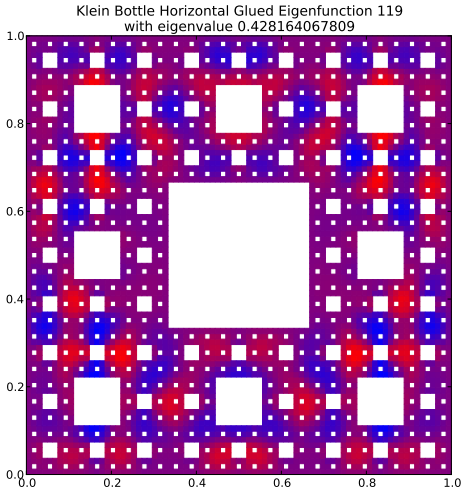


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182389147798$
Dot Value: 0.38821533962439136

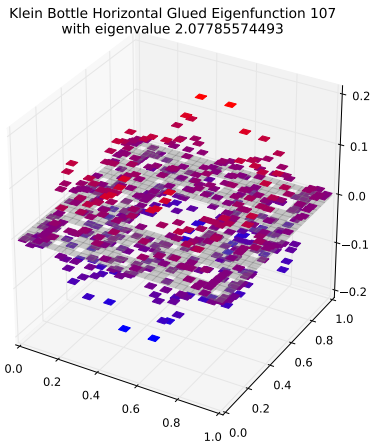
120 $M = 4$ Eigenfunction 119

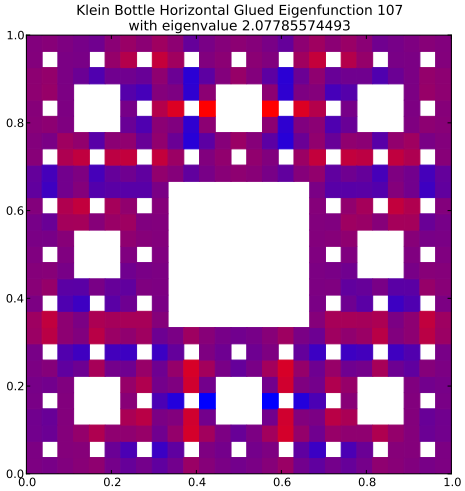
$M = 4$ Eigenfunction 119 has eigenvalue 0.428164067809





Compare to $m = 3$ eigenspace with eigenvalue 2.07785574493

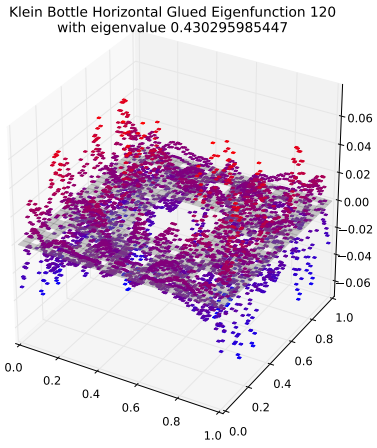


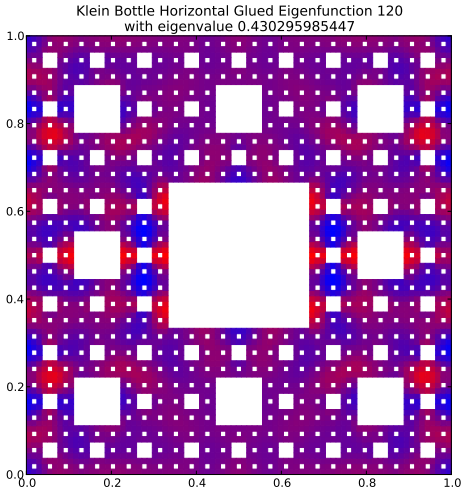


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.206060535652$
Dot Value: 0.4911807898140935

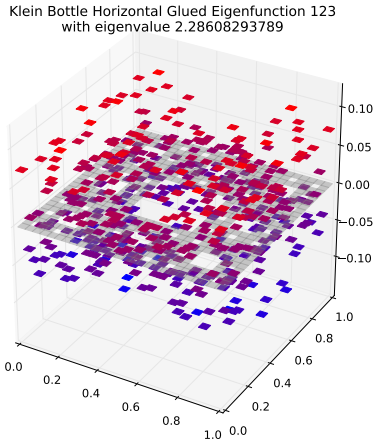
121 $M = 4$ Eigenfunction 120

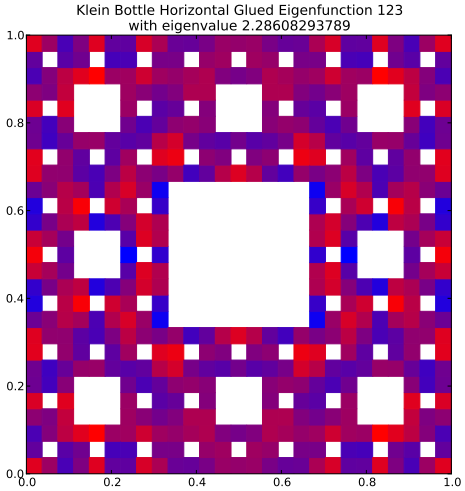
$M = 4$ Eigenfunction 120 has eigenvalue 0.430295985447





Compare to $m = 3$ eigenspace with eigenvalue 2.28608293789

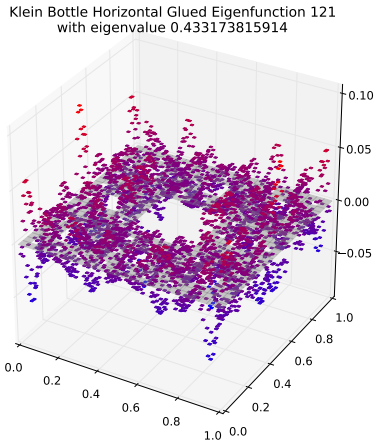


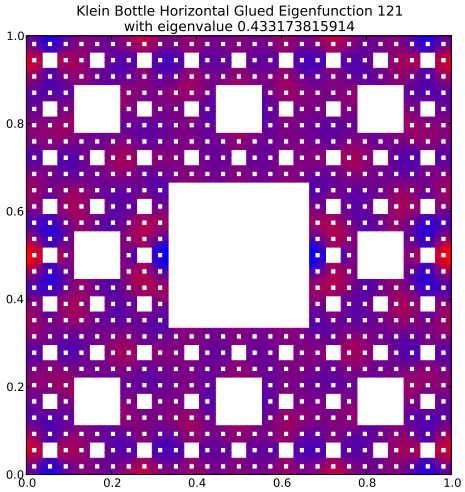


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.188224135842$
Dot Value: 0.453309031452494

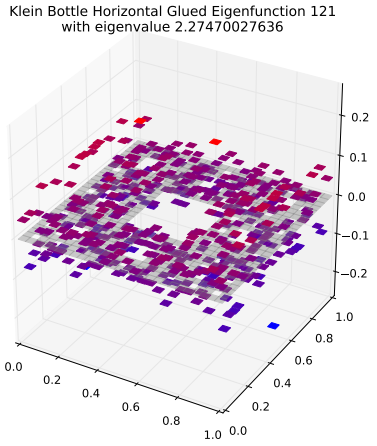
122 $M = 4$ Eigenfunction 121

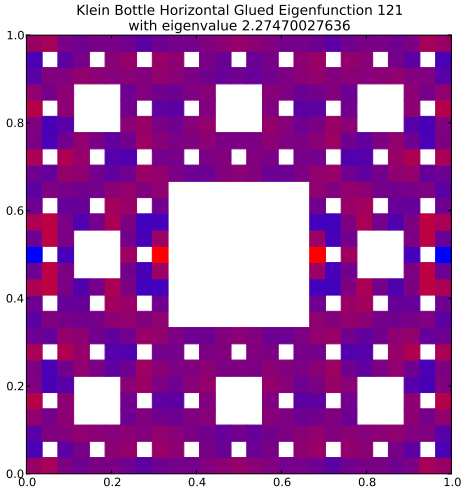
$M = 4$ Eigenfunction 121 has eigenvalue 0.433173815914





Compare to $m = 3$ eigenspace with eigenvalue 2.27470027636

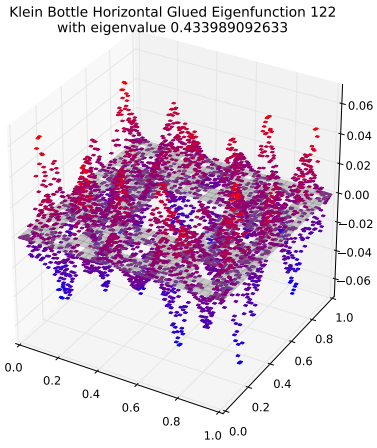


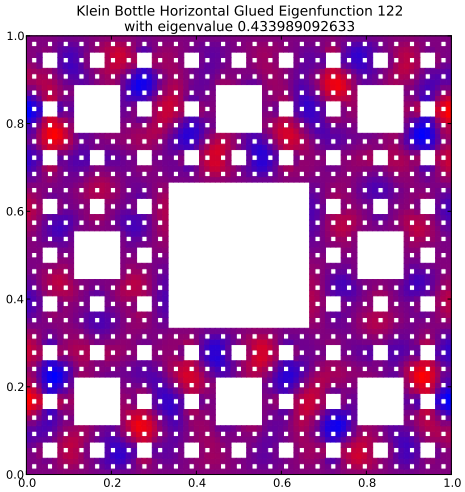


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.190431161598$
Dot Value: 0.17950163582083511

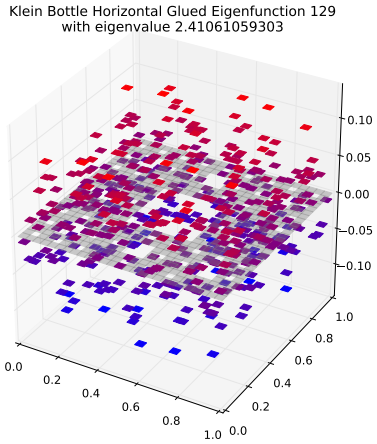
123 $M = 4$ Eigenfunction 122

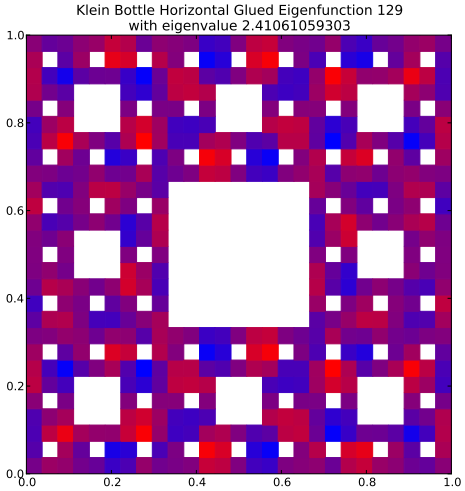
$M = 4$ Eigenfunction 122 has eigenvalue 0.433989092633





Compare to $m = 3$ eigenspace with eigenvalue 2.41061059303

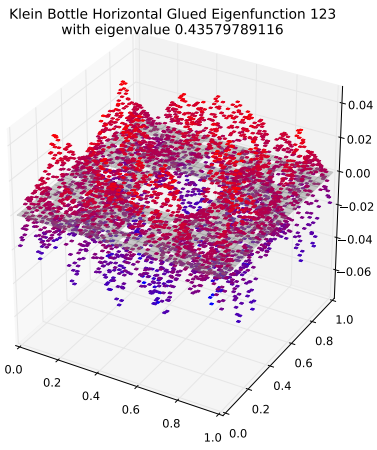


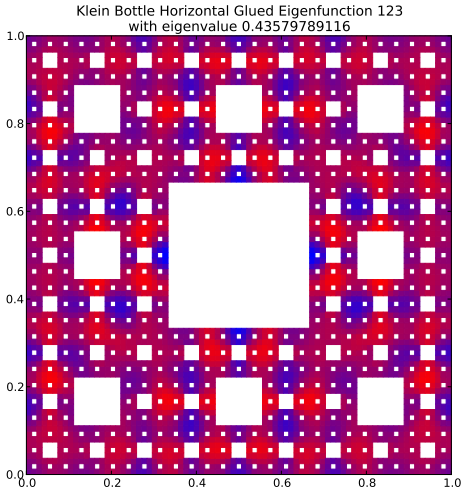


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.180032848893$
Dot Value: 0.33258648806238034

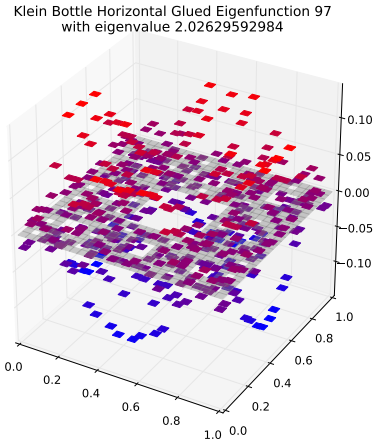
124 $M = 4$ Eigenfunction 123

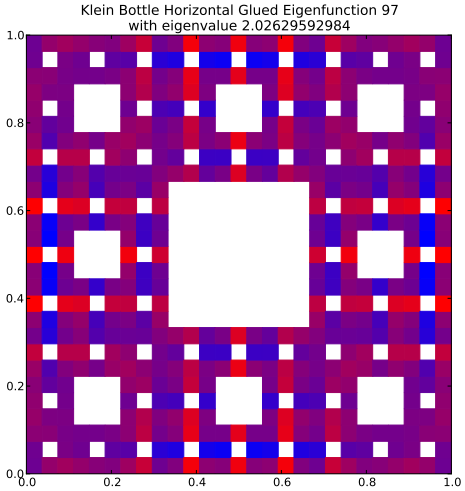
$M = 4$ Eigenfunction 123 has eigenvalue 0.43579789116





Compare to $m = 3$ eigenspace with eigenvalue 2.02629592984

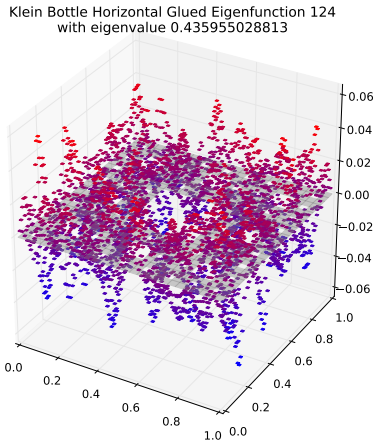


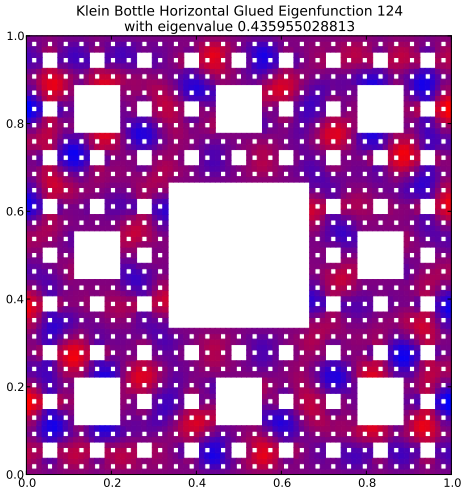


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.215071197027$
Dot Value: 0.21078249520915593

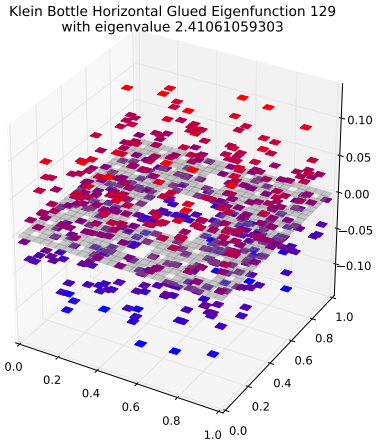
125 $M = 4$ Eigenfunction 124

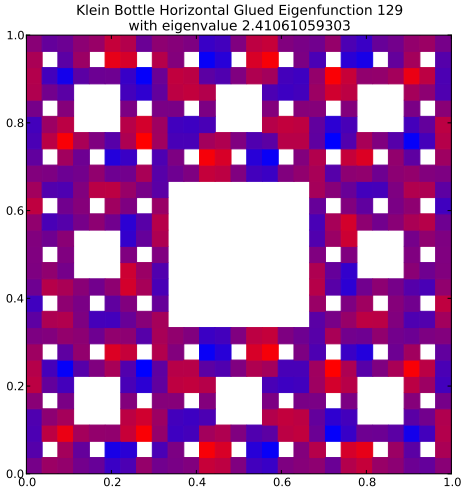
$M = 4$ Eigenfunction 124 has eigenvalue 0.435955028813





Compare to $m = 3$ eigenspace with eigenvalue 2.41061059303

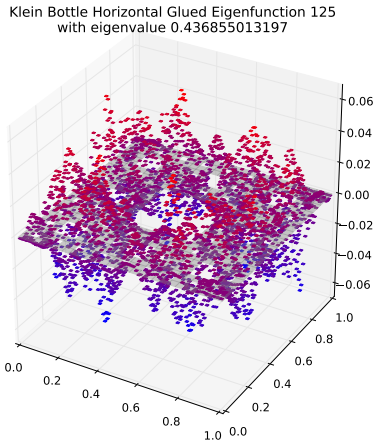


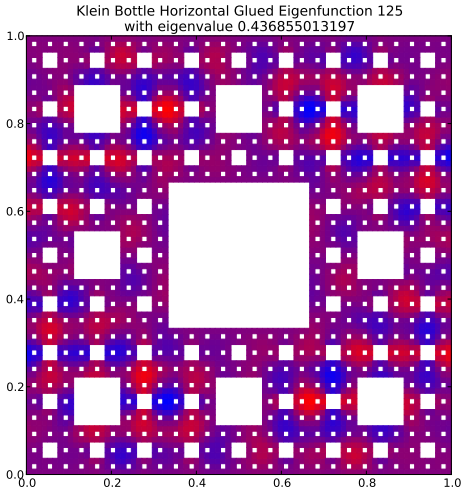


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.180848383424$
Dot Value: 0.39233211672968415

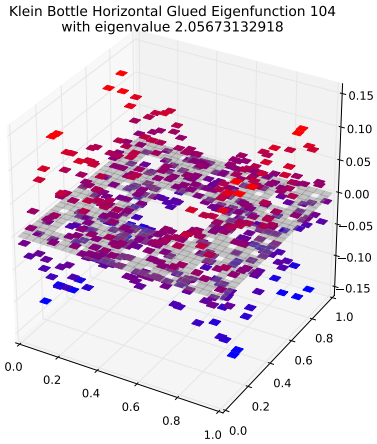
126 $M = 4$ Eigenfunction 125

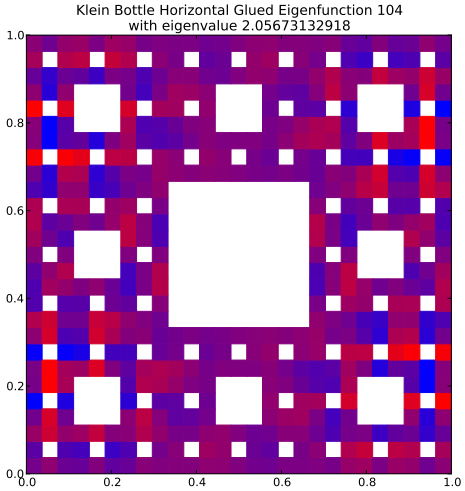
$M = 4$ Eigenfunction 125 has eigenvalue 0.436855013197





Compare to $m = 3$ eigenspace with eigenvalue 2.05673132918

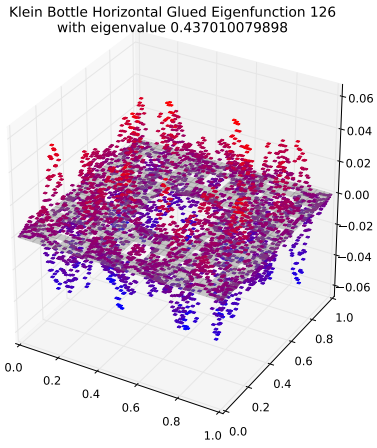


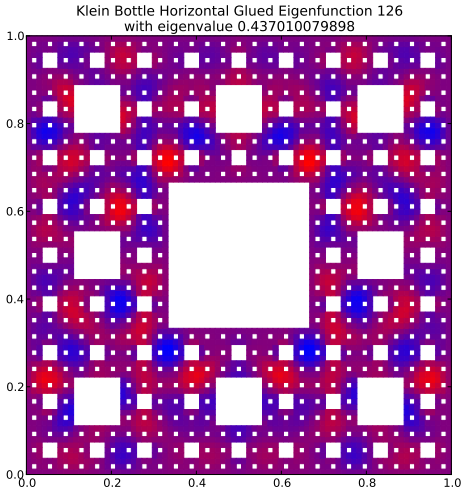


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.212402566635$
Dot Value: 0.3494298322573125

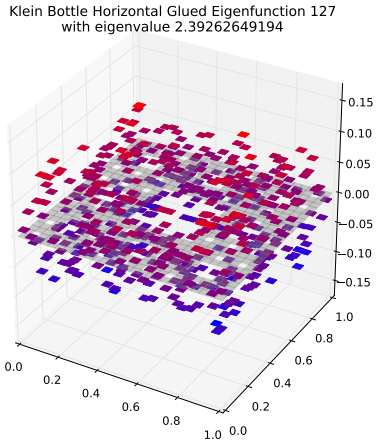
127 $M = 4$ Eigenfunction 126

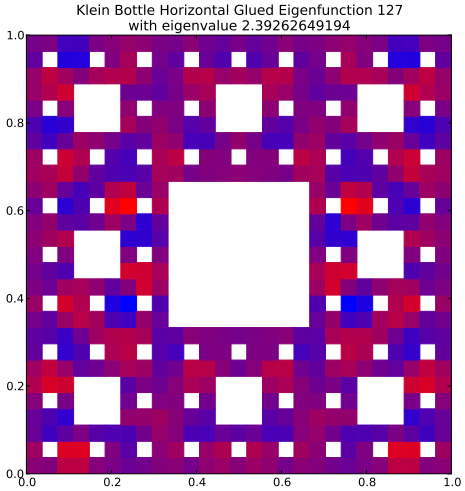
$M = 4$ Eigenfunction 126 has eigenvalue 0.437010079898





Compare to $m = 3$ eigenspace with eigenvalue 2.39262649194

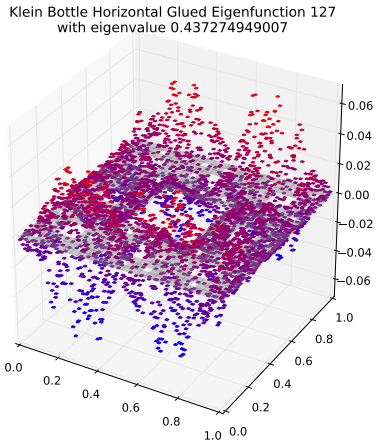


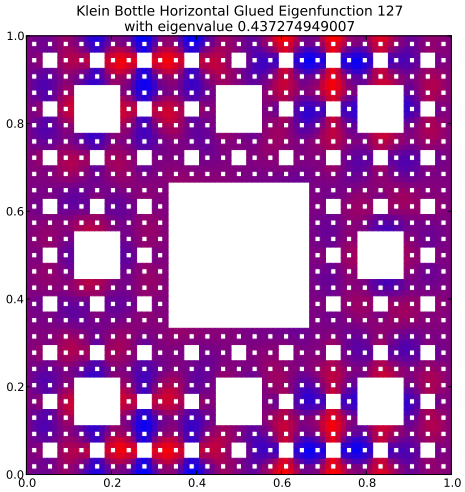


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182648683934$
Dot Value: 0.23230825952130496

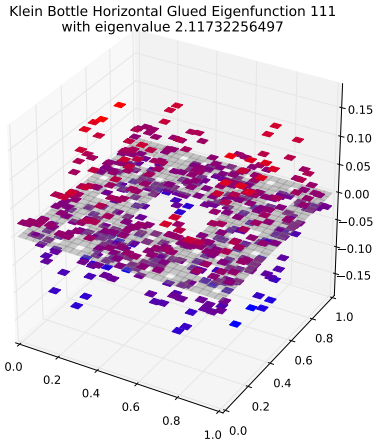
128 $M = 4$ Eigenfunction 127

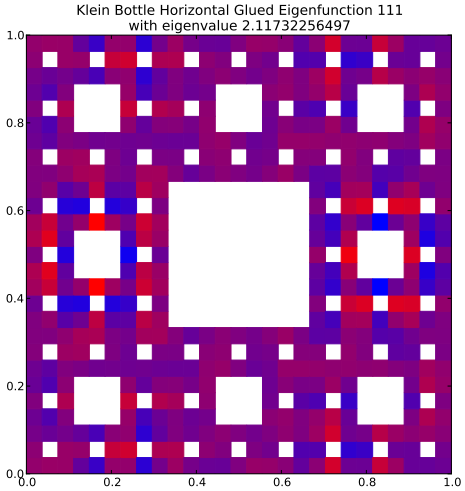
$M = 4$ Eigenfunction 127 has eigenvalue 0.437274949007





Compare to $m = 3$ eigenspace with eigenvalue 2.11732256497

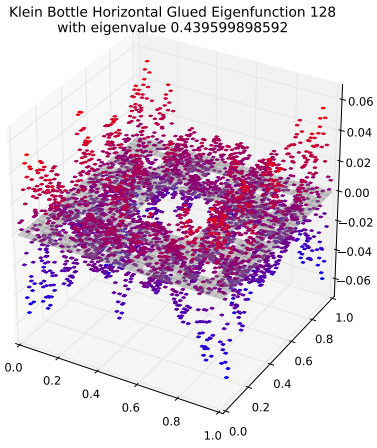


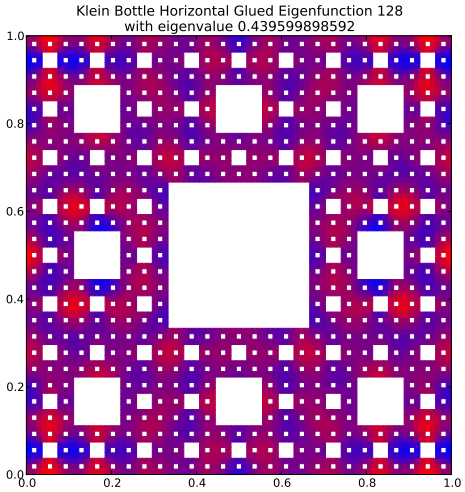


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.206522594262$
Dot Value: 0.35906243054385567

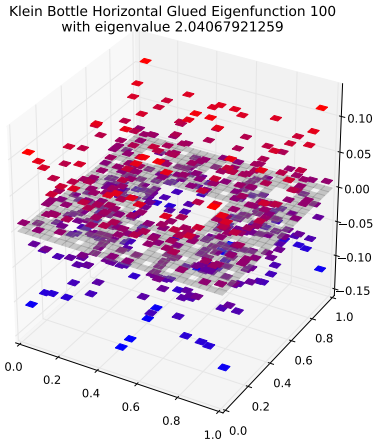
129 $M = 4$ Eigenfunction 128

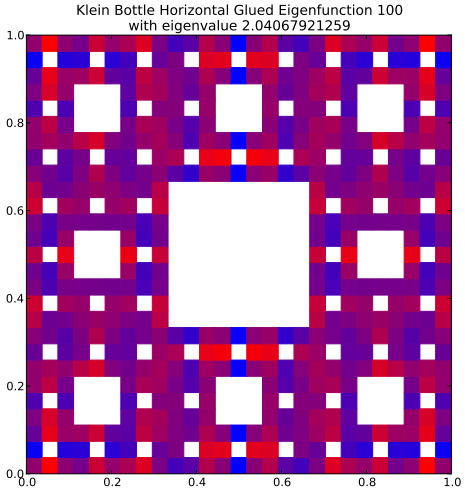
$M = 4$ Eigenfunction 128 has eigenvalue 0.439599898592





Compare to $m = 3$ eigenspace with eigenvalue 2.04067921259

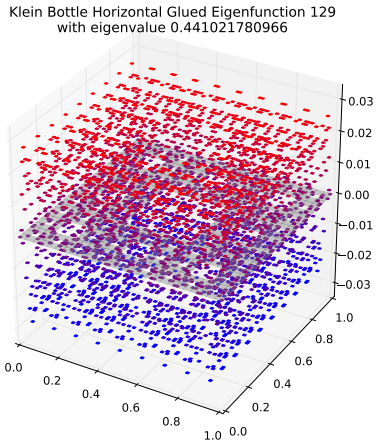


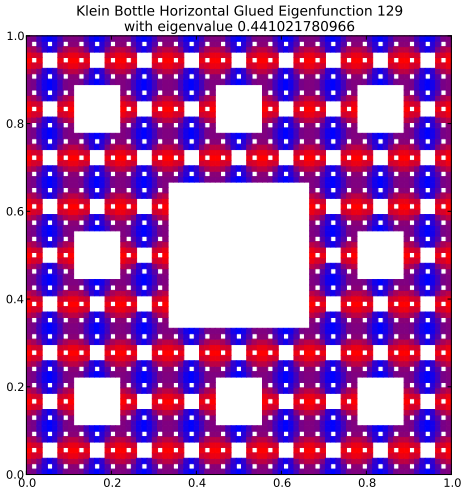


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.215418423376$
Dot Value: 0.4271153193679964

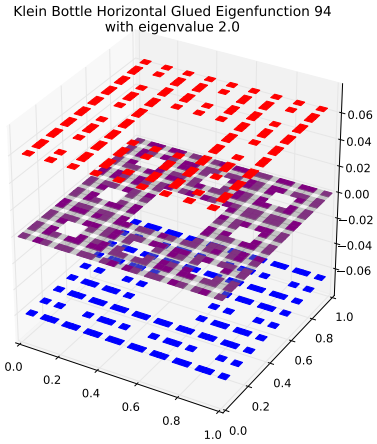
130 $M = 4$ Eigenfunction 129

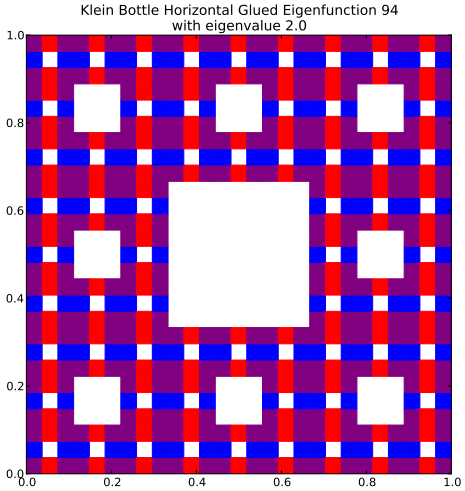
$M = 4$ Eigenfunction 129 has eigenvalue 0.441021780966





Compare to $m = 3$ eigenspace with eigenvalue 2.0

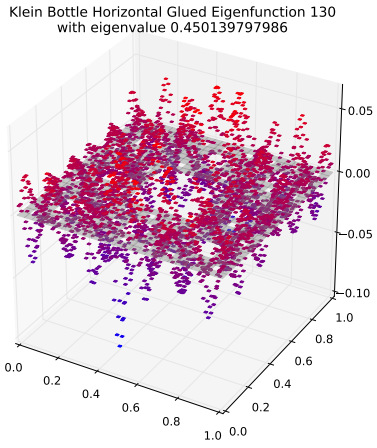


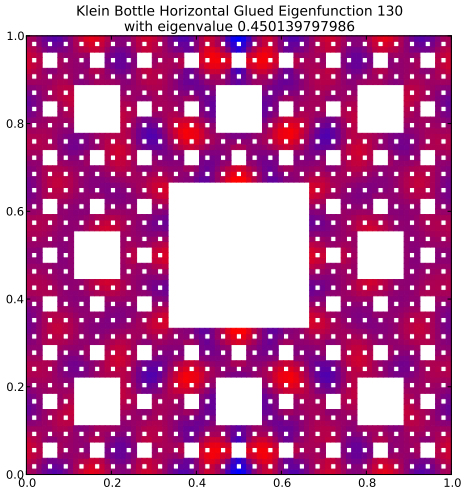


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.220510890483$
Dot Value: 0.0

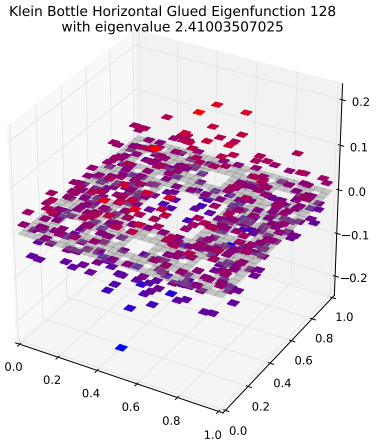
131 $M = 4$ Eigenfunction 130

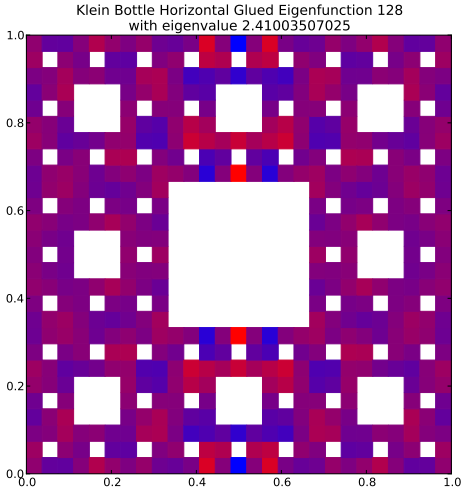
$M = 4$ Eigenfunction 130 has eigenvalue 0.450139797986





Compare to $m = 3$ eigenspace with eigenvalue 2.41003507025

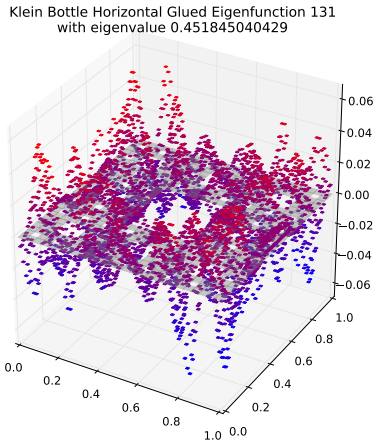


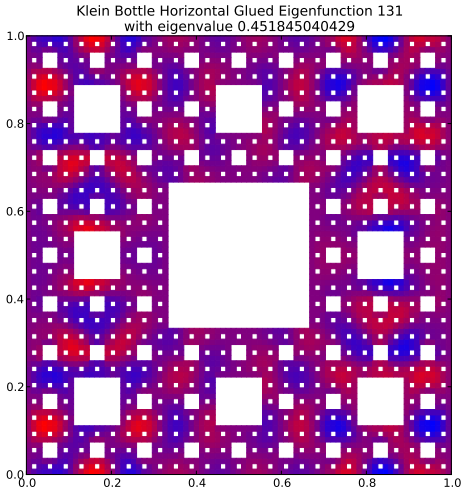


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.186777281187$
Dot Value: 0.169732501040898

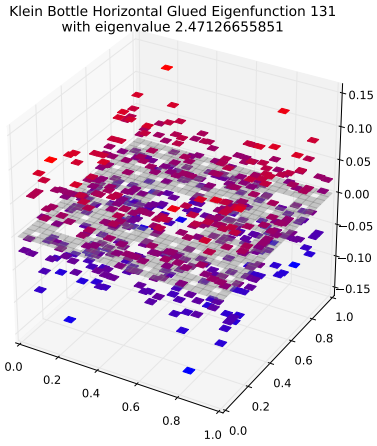
132 $M = 4$ Eigenfunction 131

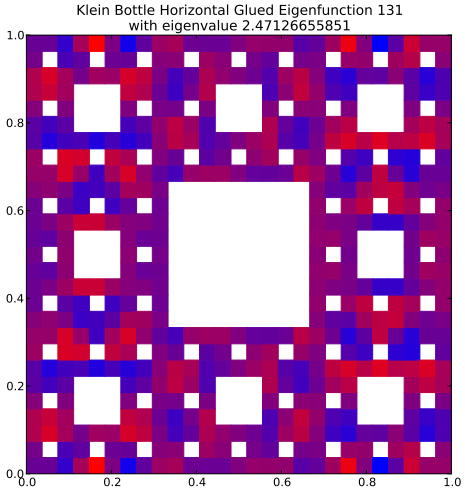
$M = 4$ Eigenfunction 131 has eigenvalue 0.451845040429





Compare to $m = 3$ eigenspace with eigenvalue 2.47126655851

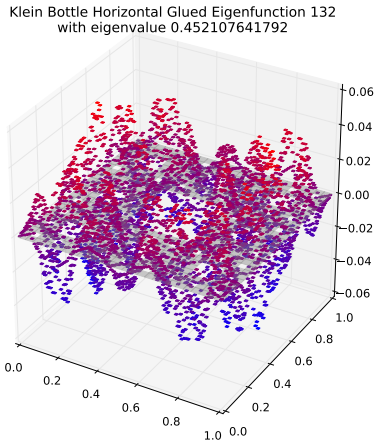


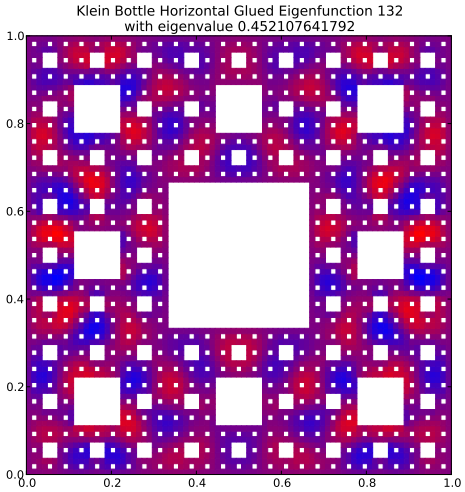


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.18283945893$
Dot Value: 0.0638895767561618

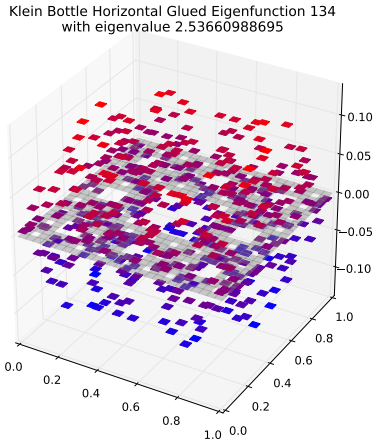
133 $M = 4$ Eigenfunction 132

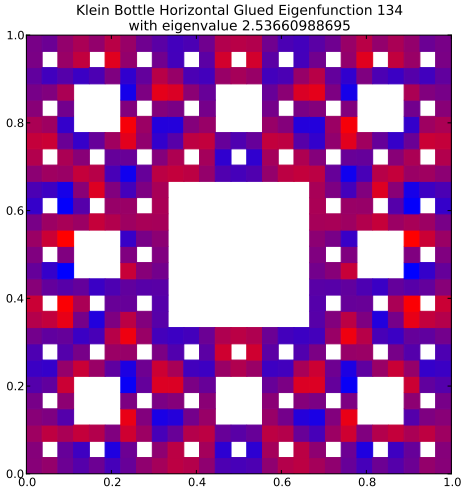
$M = 4$ Eigenfunction 132 has eigenvalue 0.452107641792





Compare to $m = 3$ eigenspace with eigenvalue 2.53660988695

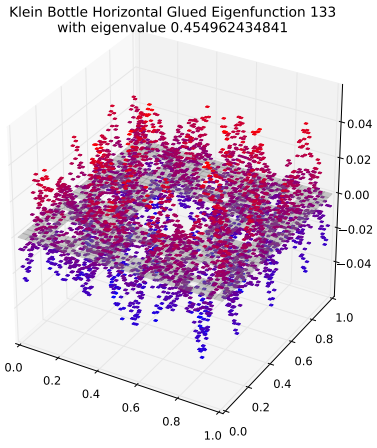


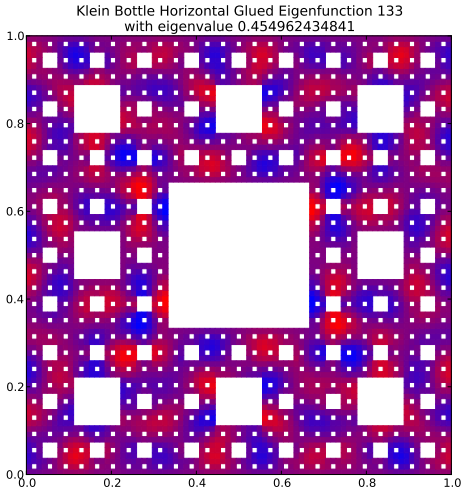


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.178233020425$
Dot Value: 0.12296608163614353

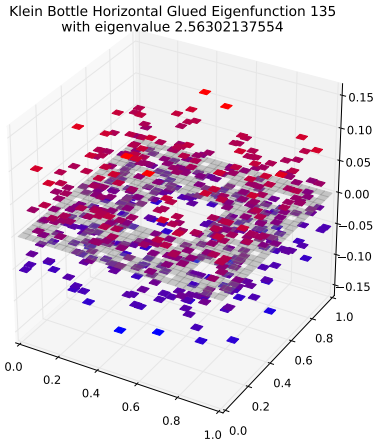
134 $M = 4$ Eigenfunction 133

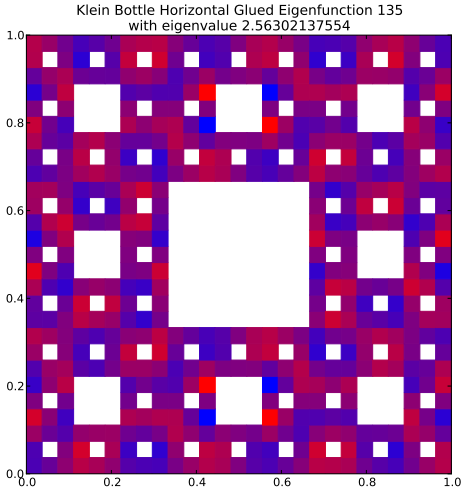
$M = 4$ Eigenfunction 133 has eigenvalue 0.454962434841





Compare to $m = 3$ eigenspace with eigenvalue 2.56302137554

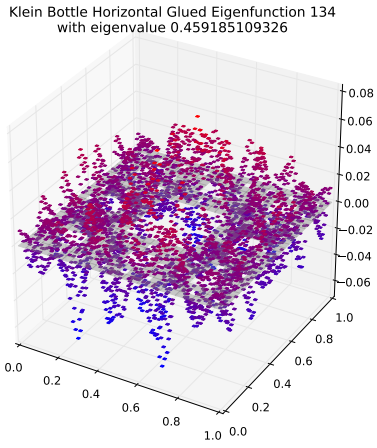


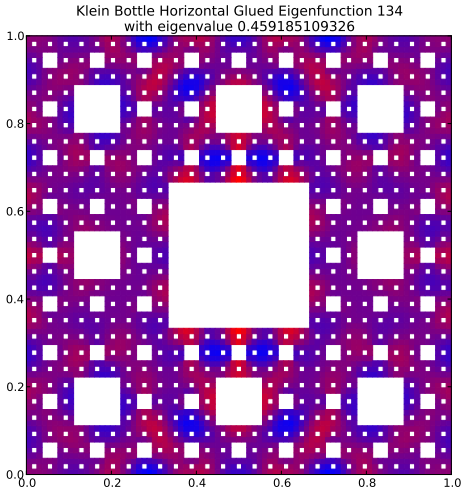


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.177510199167$
Dot Value: 0.2026069629588031

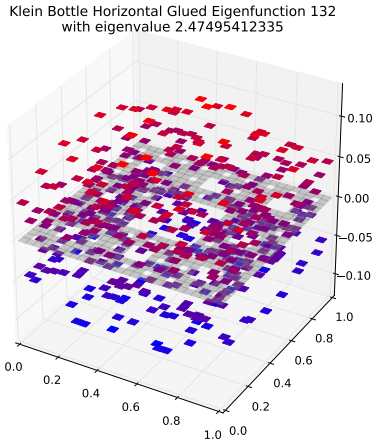
135 $M = 4$ Eigenfunction 134

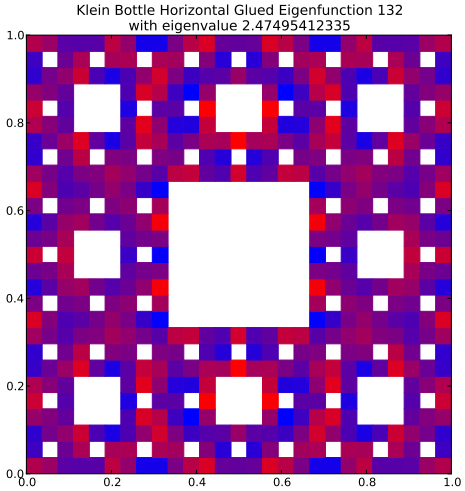
$M = 4$ Eigenfunction 134 has eigenvalue 0.459185109326





Compare to $m = 3$ eigenspace with eigenvalue 2.47495412335

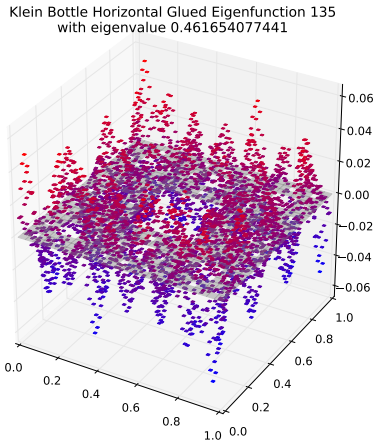


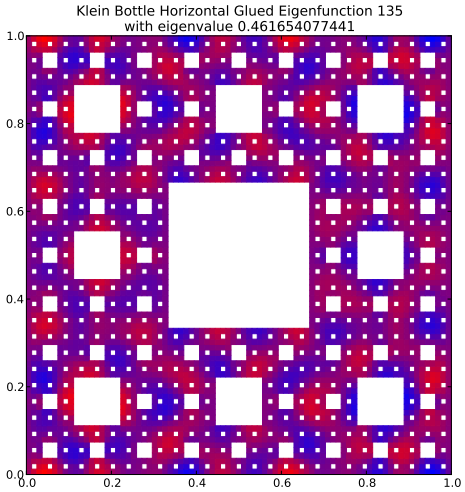


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.185532776141$
Dot Value: 0.2029309211046928

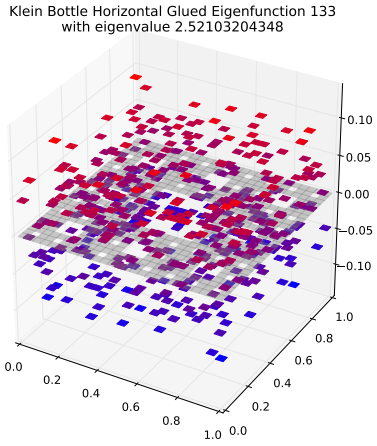
136 $M = 4$ Eigenfunction 135

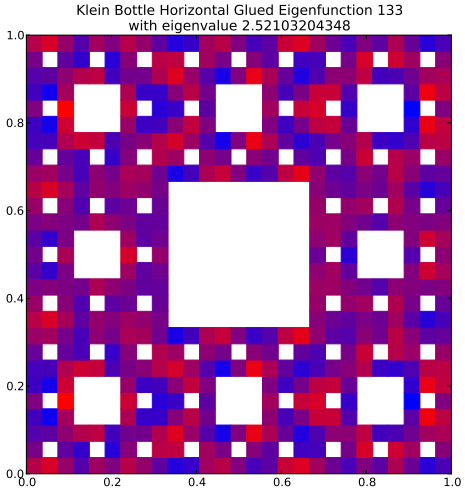
$M = 4$ Eigenfunction 135 has eigenvalue 0.461654077441





Compare to $m = 3$ eigenspace with eigenvalue 2.52103204348

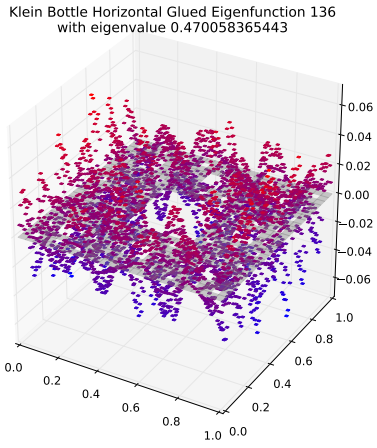


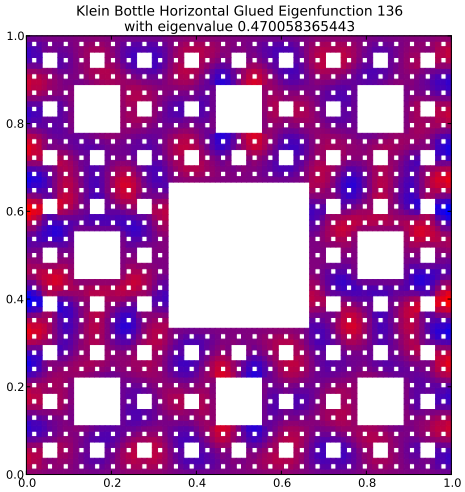


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.18312106688$
Dot Value: 0.10223805198111935

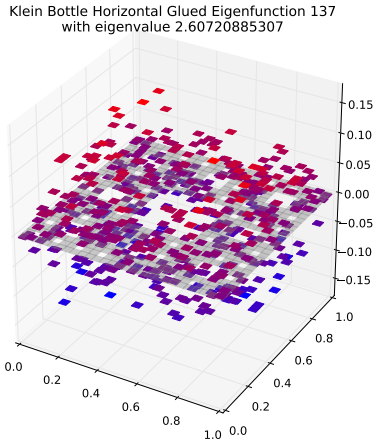
137 $M = 4$ Eigenfunction 136

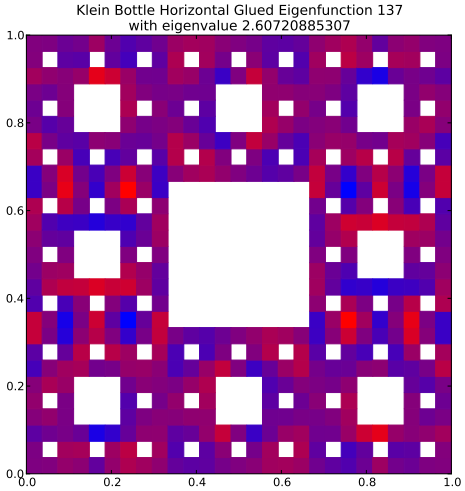
$M = 4$ Eigenfunction 136 has eigenvalue 0.470058365443





Compare to $m = 3$ eigenspace with eigenvalue 2.60720885307

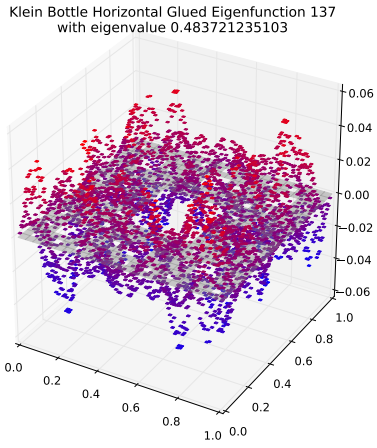


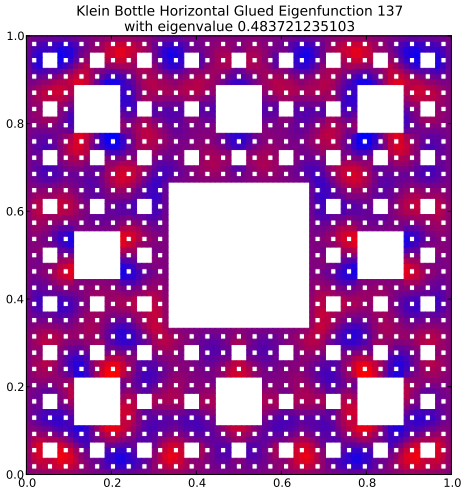


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.18029179553$
Dot Value: 0.17982158272159032

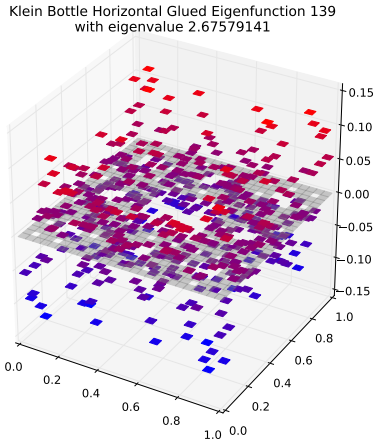
138 $M = 4$ Eigenfunction 137

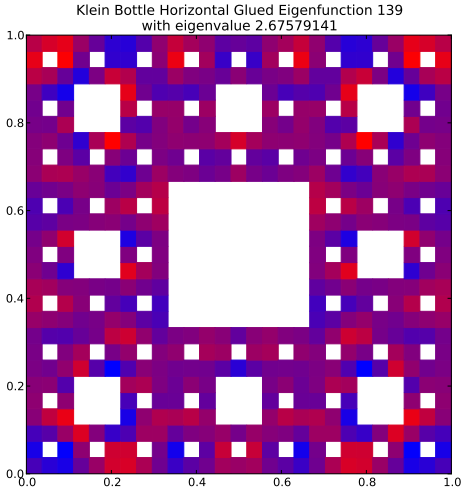
$M = 4$ Eigenfunction 137 has eigenvalue 0.483721235103





Compare to $m = 3$ eigenspace with eigenvalue 2.67579141

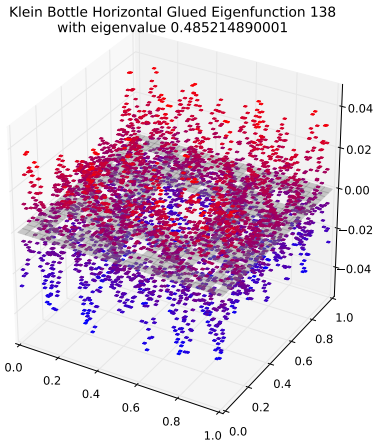


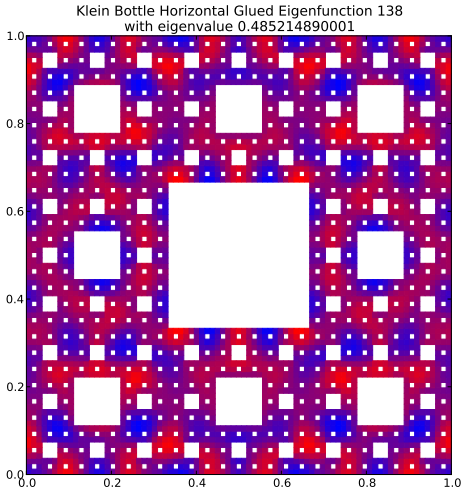


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.180776884661$
Dot Value: 0.0687665463909729

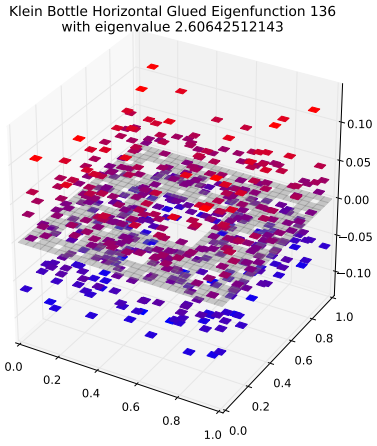
139 $M = 4$ Eigenfunction 138

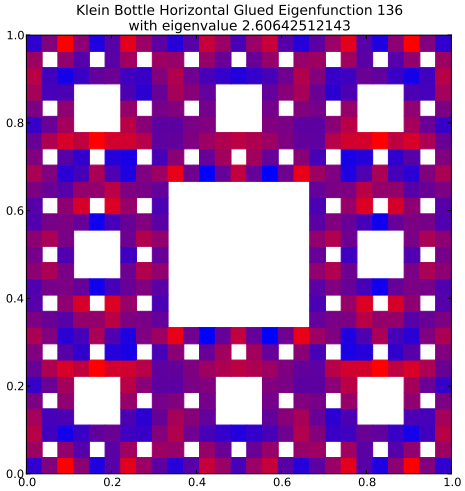
$M = 4$ Eigenfunction 138 has eigenvalue 0.485214890001





Compare to $m = 3$ eigenspace with eigenvalue 2.60642512143

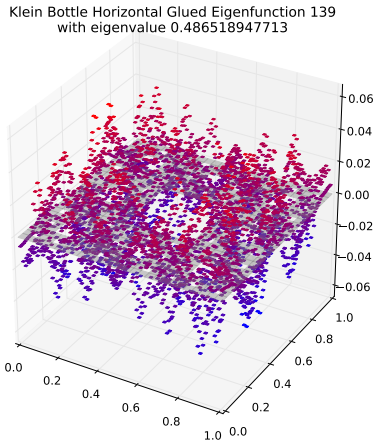


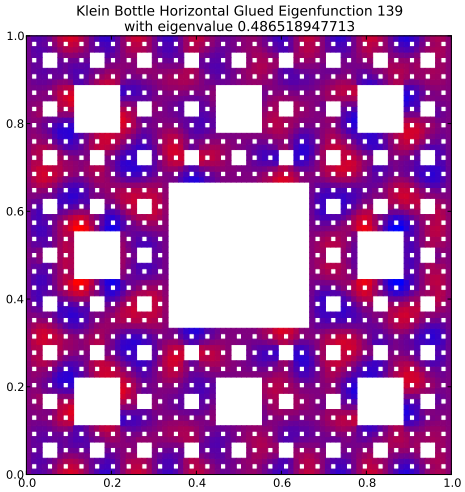


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.1861610702$
Dot Value: 0.09403404487641143

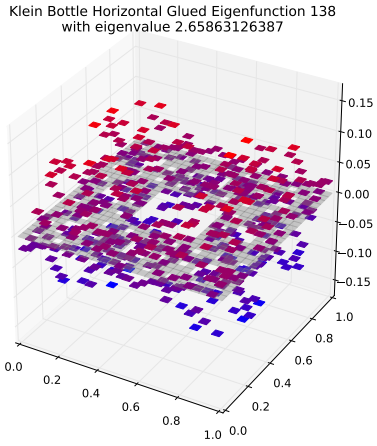
140 $M = 4$ Eigenfunction 139

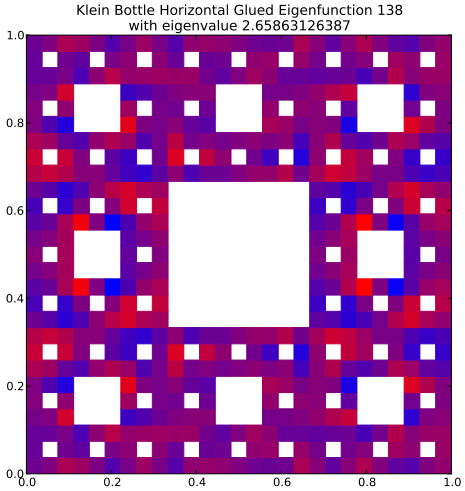
$M = 4$ Eigenfunction 139 has eigenvalue 0.486518947713





Compare to $m = 3$ eigenspace with eigenvalue 2.65863126387

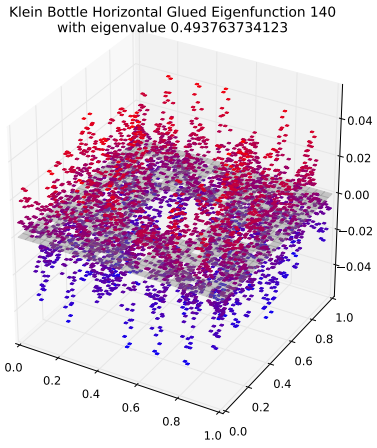


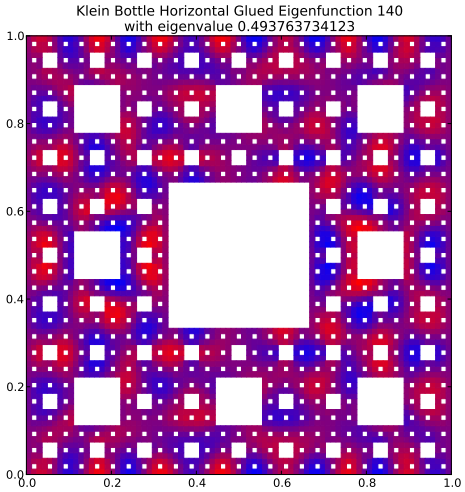


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182996022925$
Dot Value: 0.12801087867195216

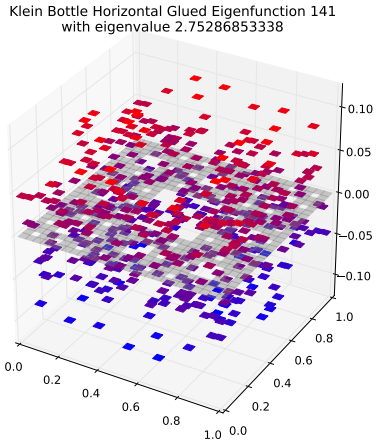
141 $M = 4$ Eigenfunction 140

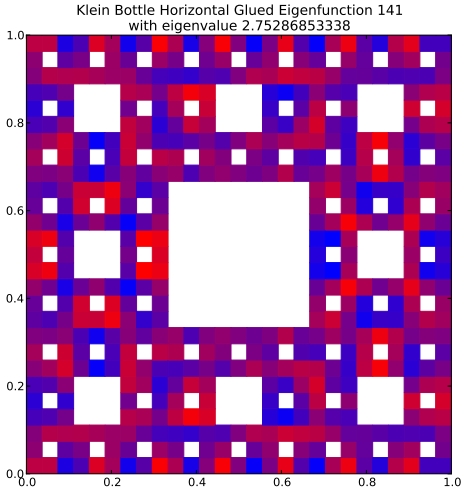
$M = 4$ Eigenfunction 140 has eigenvalue 0.493763734123





Compare to $m = 3$ eigenspace with eigenvalue 2.75286853338

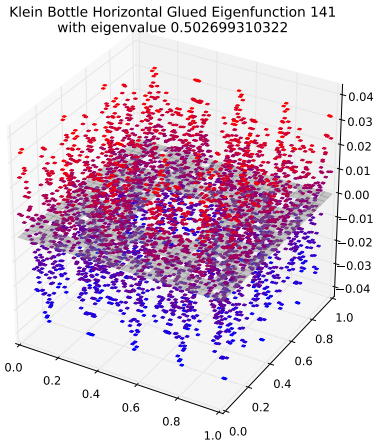


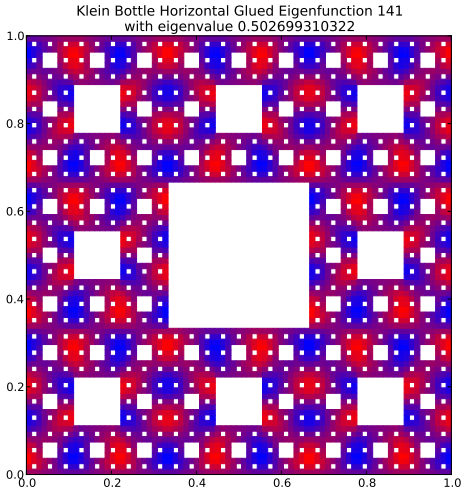


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.179363354311$
Dot Value: 0.1489763395263286

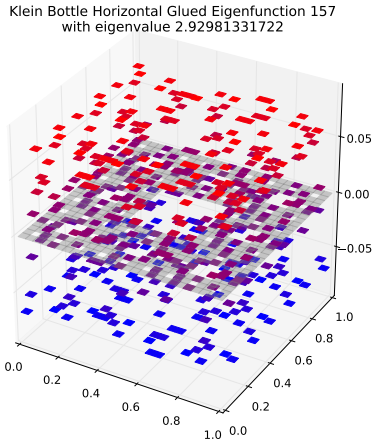
142 $M = 4$ Eigenfunction 141

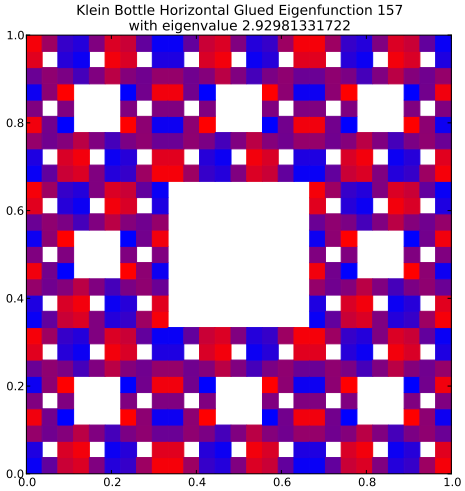
$M = 4$ Eigenfunction 141 has eigenvalue 0.502699310322





Compare to $m = 3$ eigenspace with eigenvalue 2.92981331722

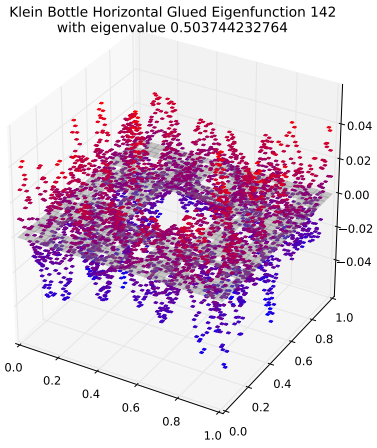


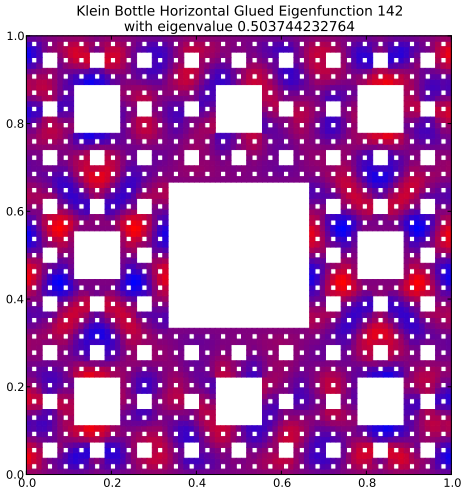


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.17158066262$
Dot Value: 0.00624149971131005

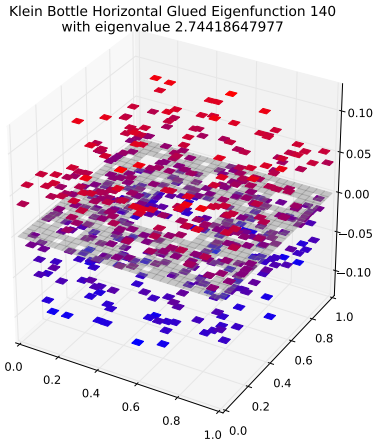
143 $M = 4$ Eigenfunction 142

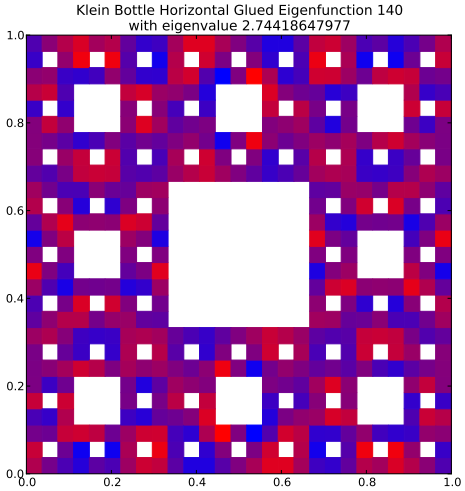
$M = 4$ Eigenfunction 142 has eigenvalue 0.503744232764





Compare to $m = 3$ eigenspace with eigenvalue 2.74418647977

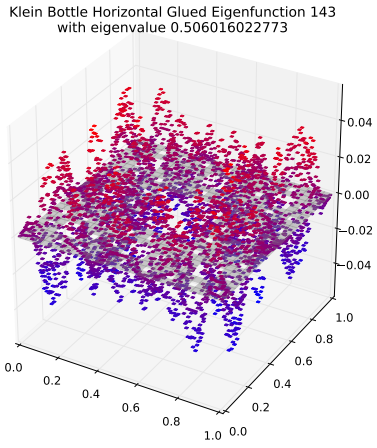


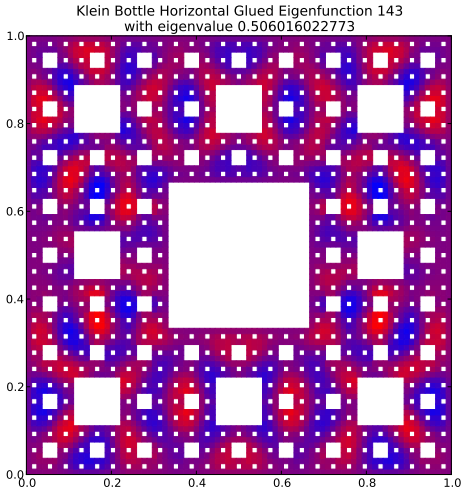


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.183567784652$
Dot Value: 0.13603373344629233

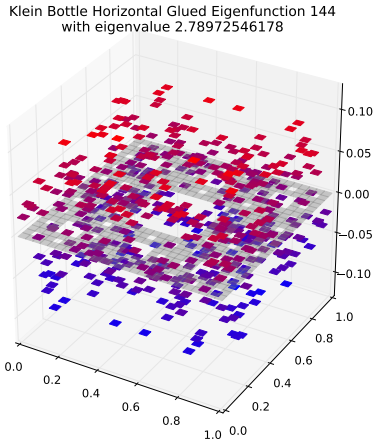
144 $M = 4$ Eigenfunction 143

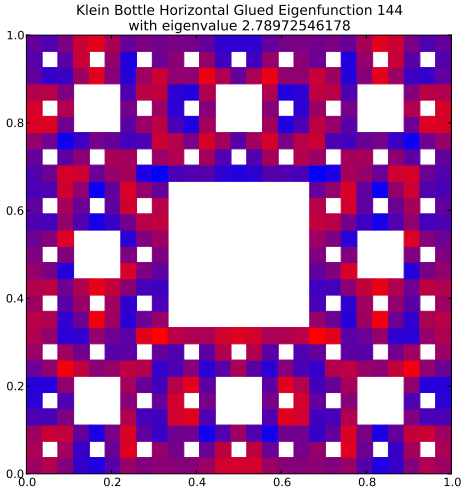
$M = 4$ Eigenfunction 143 has eigenvalue 0.506016022773





Compare to $m = 3$ eigenspace with eigenvalue 2.78972546178

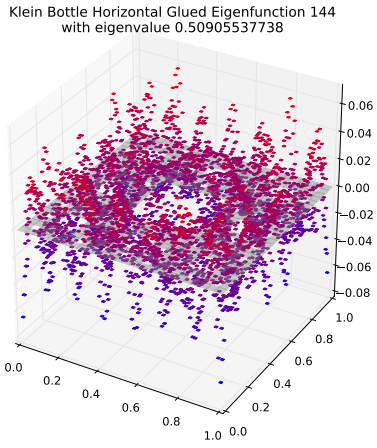


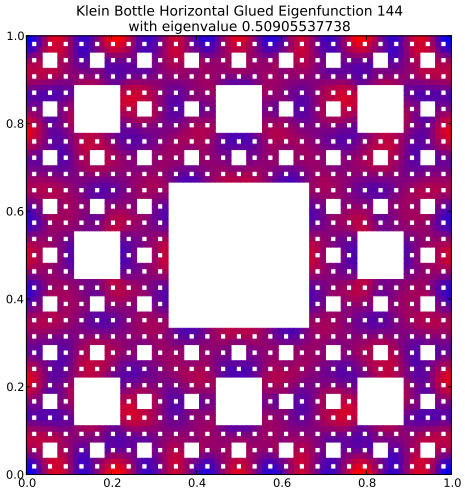


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.181385598585$
Dot Value: 0.15396458487429332

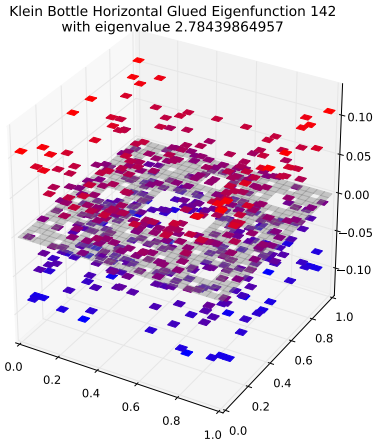
145 $M = 4$ Eigenfunction 144

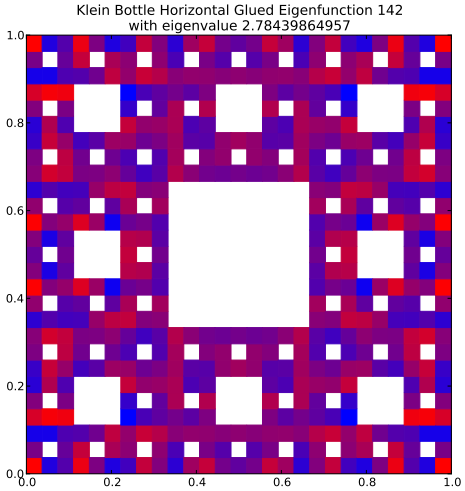
$M = 4$ Eigenfunction 144 has eigenvalue 0.50905537738





Compare to $m = 3$ eigenspace with eigenvalue 2.78439864957

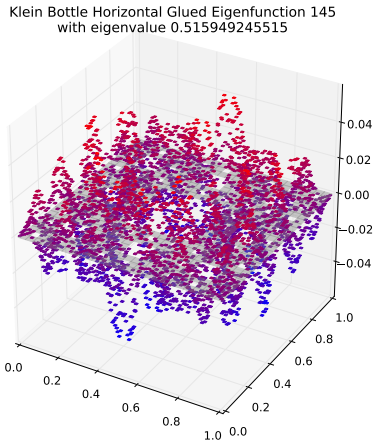


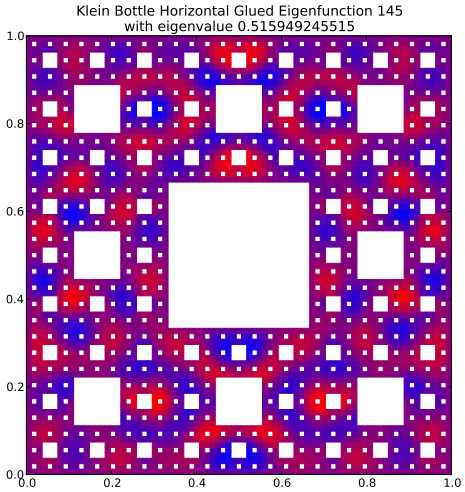


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.182824171912$
Dot Value: 0.23186242375615962

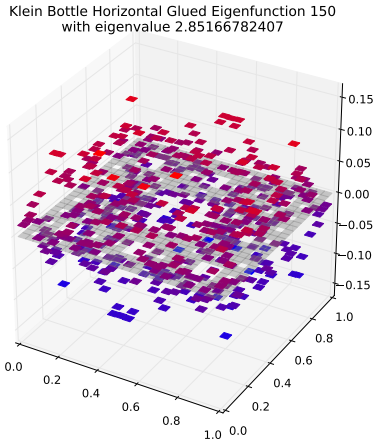
146 $M = 4$ Eigenfunction 145

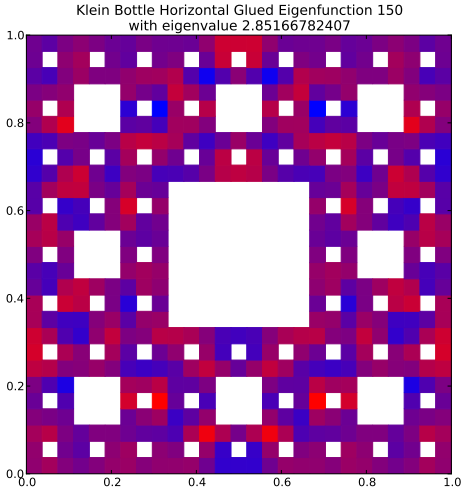
$M = 4$ Eigenfunction 145 has eigenvalue 0.515949245515





Compare to $m = 3$ eigenspace with eigenvalue 2.85166782407

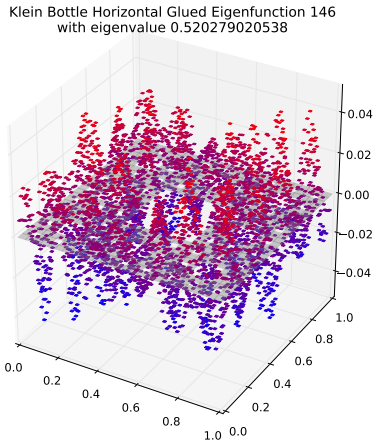


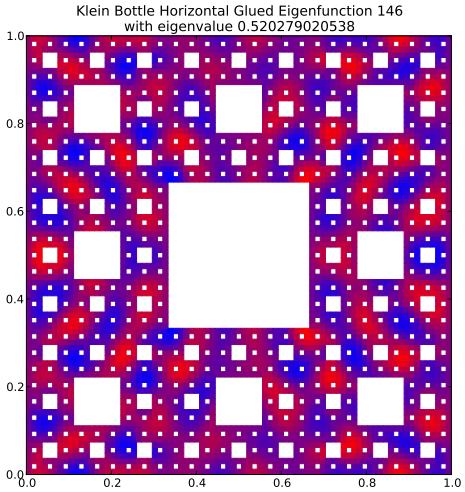


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.180928943112$
Dot Value: 0.06955067292699746

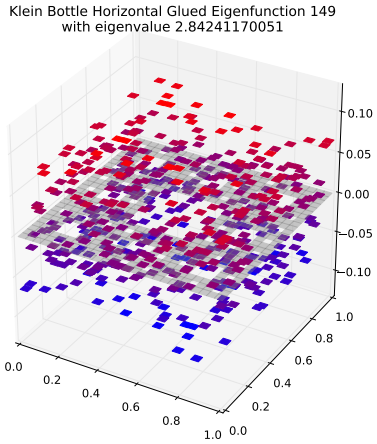
147 $M = 4$ Eigenfunction 146

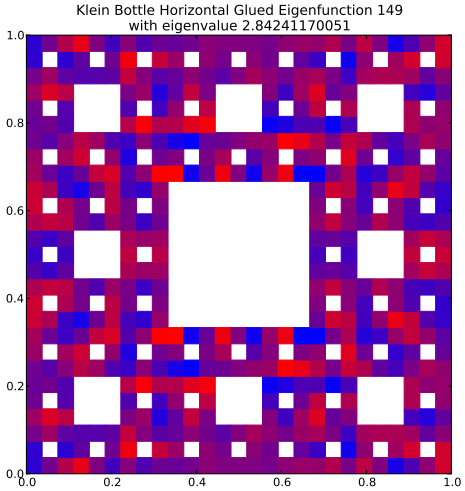
$M = 4$ Eigenfunction 146 has eigenvalue 0.520279020538





Compare to $m = 3$ eigenspace with eigenvalue 2.84241170051

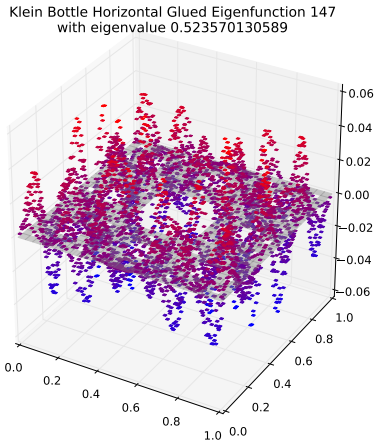


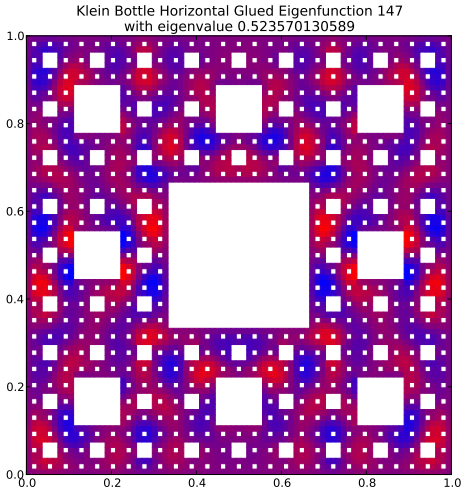


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.183041401231$
Dot Value: 0.14921088687290507

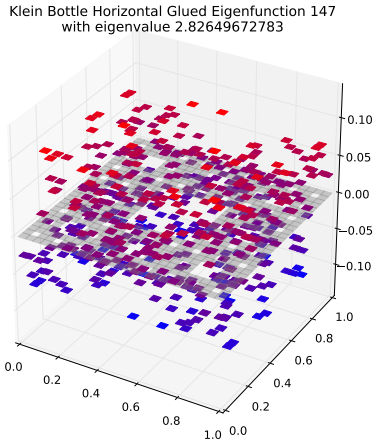
148 $M = 4$ Eigenfunction 147

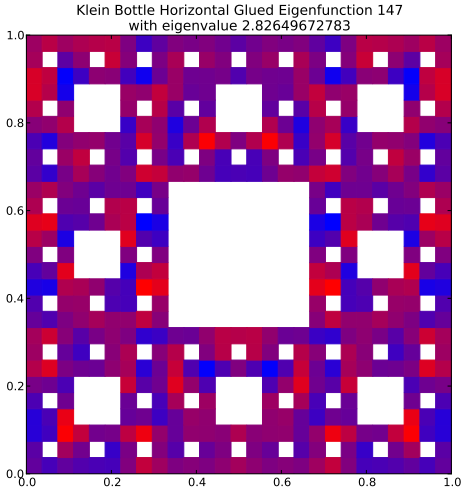
$M = 4$ Eigenfunction 147 has eigenvalue 0.523570130589





Compare to $m = 3$ eigenspace with eigenvalue 2.82649672783

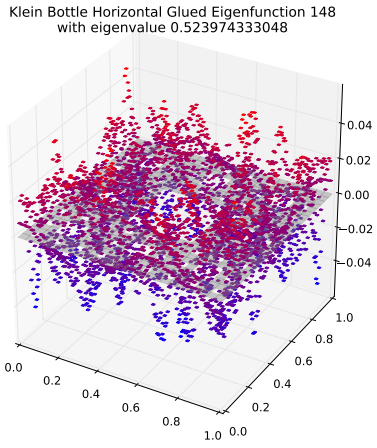


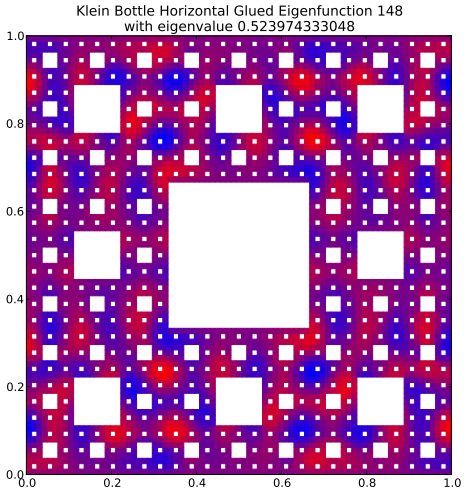


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.185236418438$
Dot Value: 0.13348487240111384

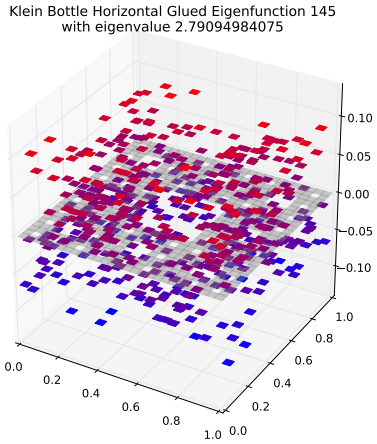
149 $M = 4$ Eigenfunction 148

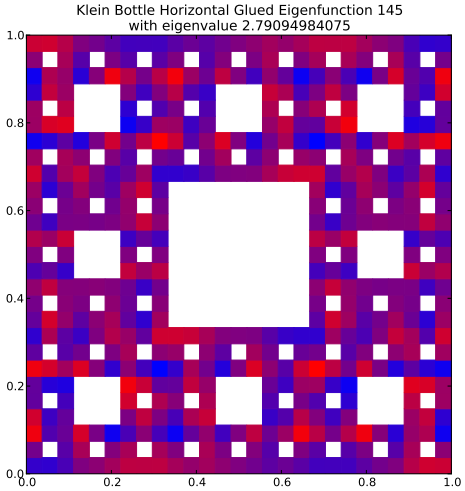
$M = 4$ Eigenfunction 148 has eigenvalue 0.523974333048





Compare to $m = 3$ eigenspace with eigenvalue 2.79094984075

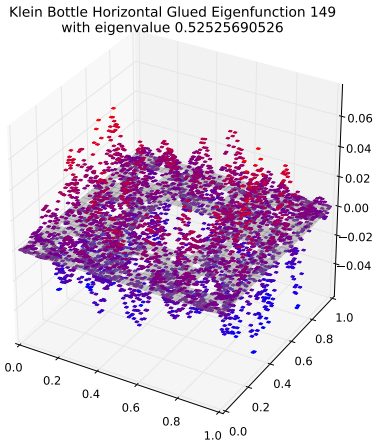


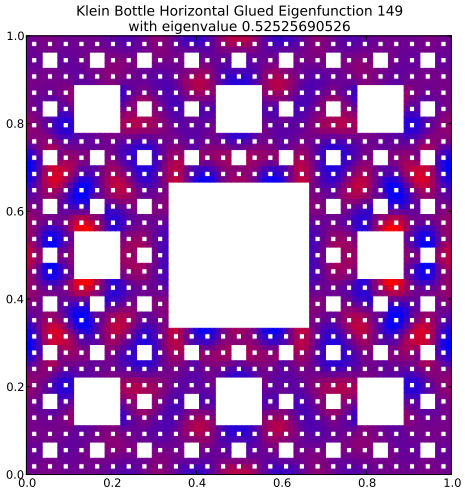


Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.187740505185$
Dot Value: 0.07064906323655262

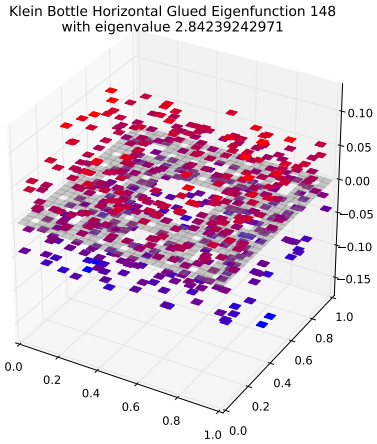
150 $M = 4$ Eigenfunction 149

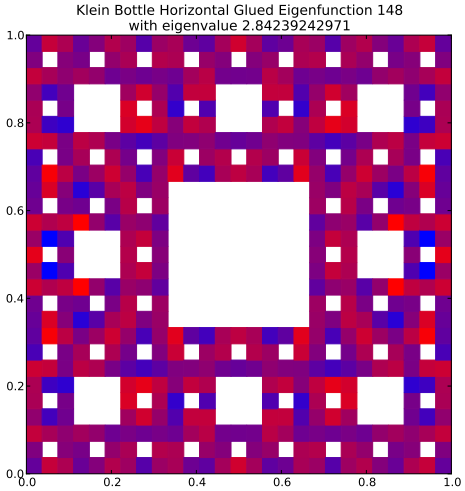
$M = 4$ Eigenfunction 149 has eigenvalue 0.52525690526





Compare to $m = 3$ eigenspace with eigenvalue 2.84239242971





Eigenvalue Ratio: $\lambda_4/\lambda_3 = 0.184793943218$
Dot Value: 0.20964767465677636