Tables
[graphs attached separately]

Ackley function with swarm size = 100

	z-ackley-100-global-no-fips.log	z-ackley-100-global-no-pg.log	z-ackley-100-global-yes-fips.log	z-ackley-100-global-yes-pg.log
average	21.06	19.83	20.65	19.83
stddev	0.06	0.03	0.34	0.03

	z-ackley-100-random-no-fips.log	z-ackley-100-random-no-pg.log	z-ackley-100-random-yes-fips.log	z-ackley-100-random-yes-pg.log
average	21.06	19.83	20.08	19.83
stddev	0.05	1.24	0.18	1.33

	z-ackley-100-ring-no-fips.log	z-ackley-100-ring-no-pg.log	z-ackley-100-ring-yes-fips.log	z-ackley-100-ring-yes-pg.log
average	20.96	19.81	20.72	19.80
stddev	0.06	0.03	0.06	0.05

	z-ackley-100-von-no-fips.log	z-ackley-100-von-no-pg.log	z-ackley-100-von-yes-fips.log	z-ackley-100-von-yes-pg.log
average	20.99	18.97	20.77	19.76
stddev	0.06	3.87	0.04	0.05

Ackley function with swarm size = 36

	z-ackley-36-global-no-fips.log	z-ackley-36-global-no-pg.log	z-ackley-36-global-yes-fips.log	z-ackley-36-global-yes-pg.log
average	21.10	19.82	20.62	19.83
stddev	0.05	0.03	0.32	0.03

	z-ackley-36-random-no-fips.log	z-ackley-36-random-no-pg.log	z-ackley-36-random-yes-fips.log	z-ackley-36-random-yes-pg.log
average	21.08	20.30	20.07	20.61
stddev	0.06	0.85	0.16	0.52

	z-ackley-36-ring-no-fips.log	z-ackley-36-ring-no-pg.log	z-ackley-36-ring-yes-fips.log	z-ackley-36-ring-yes-pg.log
average	20.99	19.88	20.76	19.86
stddev	0.06	0.10	0.06	0.08

	z-ackley-36-von-no-fips.log	z-ackley-36-von-no-pg.log	z-ackley-36-von-yes-fips.log	z-ackley-36-von-yes-pg.log
average	21.04	19.79	20.80	19.80
stddev	0.06	0.06	0.06	0.04

Ackley function with swarm size = 49

	z-ackley-49-global-no-fips.log	z-ackley-49-global-no-pg.log	z-ackley-49-global-yes-fips.log	z-ackley-49-global-yes-pg.log
average	21.08	19.83	20.63	19.83
stddev	0.06	0.03	0.32	0.03

	z-ackley-49-random-no-fips.log	z-ackley-49-random-no-pg.log	z-ackley-49-random-yes-fips.log	z-ackley-49-random-yes-pg.log
average	21.07	20.52	20.05	20.27
stddev	0.06	0.66	0.12	0.98

	z-ackley-49-ring-no-fips.log	z-ackley-49-ring-no-pg.log	z-ackley-49-ring-yes-fips.log	z-ackley-49-ring-yes-pg.log
average	20.99	19.85	20.77	19.85
stddev	0.06	0.06	0.05	0.07

	z-ackley-49-von-no-fips.log	z-ackley-49-von-no-pg.log	z-ackley-49-von-yes-fips.log	z-ackley-49-von-yes-pg.log
average	21.02	19.40	20.80	19.76
stddev	0.06	2.64	0.05	0.16

Ackley function with swarm size = 9

	z-ackley-9-global-no-fips.log	z-ackley-9-global-no-pg.log	z-ackley-9-global-yes-fips.log	z-ackley-9-global-yes-pg.log
average	21.13	19.91	20.62	19.90
stddev	0.07	0.10	0.27	0.07

	z-ackley-9-random-no-fips.log	z-ackley-9-random-no-pg.log	z-ackley-9-random-yes-fips.log	z-ackley-9-random-yes-pg.log
average	21.10	20.83	19.99	20.82
stddev	0.05	0.11	0.20	0.11

	z-ackley-9-ring-no-fips.log	z-ackley-9-ring-no-pg.log	z-ackley-9-ring-yes-fips.log	z-ackley-9-ring-yes-pg.log
average	21.08	20.07	20.88	20.15
stddev	0.05	0.23	0.08	0.22

	z-ackley-9-von-no-fips.log	z-ackley-9-von-no-pg.log	z-ackley-9-von-yes-fips.log	z-ackley-9-von-yes-pg.log
average	21.11	19.89	20.85	19.87
stddev	0.06	0.06	0.23	0.07

Griewank function with swarm size = 100

	z-griewank-100-global-no-fips.log	z-griewank-100-global-no-pg.log	z-griewank-100-global-yes-fips.log	z-griewank-100-global-yes-pg.log
average	8516.65	0.11	31.20	0.12
stddev	1858.18	0.07	17.57	0.05

	z-griewank-100-random-no-fips.log	z-griewank-100-random-no-pg.log	z-griewank-100-random-yes-fips.log	z-griewank-100-random-yes-pg.log
average	2159.68	0.04	25.05	0.04
stddev	478.17	0.04	14.78	0.05

	z-griewank-100-ring-no-fips.log	z-griewank-100-ring-no-pg.log	z-griewank-100-ring-yes-fips.log	z-griewank-100-ring-yes-pg.log
average	249.07	0.03	0.32	0.04
stddev	55.93	0.01	0.17	0.02

	z-griewank-100-von-no-fips.log	z-griewank-100-von-no-pg.log	z-griewank-100-von-yes-fips.log	z-griewank-100-von-yes-pg.log
average	261.87	0.03	0.28	0.04
stddev	56.00	0.02	0.17	0.02

Griewank function with swarm size = 36

	z-griewank-36-global-no-fips.log	z-griewank-36-global-no-pg.log	z-griewank-36-global-yes-fips.log	z-griewank-36-global-yes-pg.log
average	1527.39	0.17	57.82	0.17
stddev	325.71	0.15	42.55	0.13

	z-griewank-36-random-no-fips.log	z-griewank-36-random-no-pg.log	z-griewank-36-random-yes-fips.log	z-griewank-36-random-yes-pg.log
average	450.29	0.08	30.13	0.06
stddev	129.74	0.10	19.57	0.06

	z-griewank-36-ring-no-fips.log	z-griewank-36-ring-no-pg.log	z-griewank-36-ring-yes-fips.log	z-griewank-36-ring-yes-pg.log
average	286.55	0.06	3.74	0.05
stddev	76.19	0.04	4.16	0.02

	z-griewank-36-von-no-fips.log	z-griewank-36-von-no-pg.log	z-griewank-36-von-yes-fips.log	z-griewank-36-von-yes-pg.log
average	320.83	0.06	4.39	0.06
stddev	58.84	0.03	3.20	0.04

Griewank function with swarm size = 49

	z-griewank-49-global-no-fips.log	z-griewank-49-global-no-pg.log	z-griewank-49-global-yes-fips.log	z-griewank-49-global-yes-pg.log
average	2546.25	0.15	50.88	0.16
stddev	668.82	0.11	24.93	0.09

	z-griewank-49-random-no-fips.log	z-griewank-49-random-no-pg.log	z-griewank-49-random-yes-fips.log	z-griewank-49-random-yes-pg.log
average	656.20	0.05	35.94	0.06
stddev	180.17	0.02	27.37	0.07

	z-griewank-49-ring-no-fips.log	z-griewank-49-ring-no-pg.log	z-griewank-49-ring-yes-fips.log	z-griewank-49-ring-yes-pg.log
average	281.33	0.05	1.26	0.04
stddev	70.01	0.03	1.60	0.02

	z-griewank-49-von-no-fips.log	z-griewank-49-von-no-pg.log	z-griewank-49-von-yes-fips.log	z-griewank-49-von-yes-pg.log
average	279.09	0.05	1.57	0.05
stddev	67.69	0.03	1.57	0.03

Griewank function with swarm size = 9

	z-griewank-9-global-no-fips.log	z-griewank-9-global-no-pg.log	z-griewank-9-global-yes-fips.log	z-griewank-9-global-yes-pg.log
average	431.07	4.01	99.90	4.32
stddev	91.59	7.41	60.73	7.03

	z-griewank-9-random-no-fips.log	z-griewank-9-random-no-pg.log	z-griewank-9-random-yes-fips.log	z-griewank-9-random-yes-pg.log
average	373.12	2.21	11.38	4.55
stddev	77.75	3.79	13.40	7.91

	z-griewank-9-ring-no-fips.log	z-griewank-9-ring-no-pg.log	z-griewank-9-ring-yes-fips.log	z-griewank-9-ring-yes-pg.log
average	393.73	0.96	109.54	0.76
stddev	54.60	2.27	49.93	1.62

	z-griewank-9-von-no-fips.log	z-griewank-9-von-no-pg.log	z-griewank-9-von-yes-fips.log	z-griewank-9-von-yes-pg.log
average	398.34	1.07	77.11	1.25
stddev	80.50	1.39	45.48	2.35

Rastrigin function with swarm size = 49

	z-rastrigin-49-global-no-fips.log	z-rastrigin-49-global-no-pg.log	z-rastrigin-49-global-yes-fips.log	z-rastrigin-49-global-yes-pg.log
average	3905.85	215.51	375.18	210.19
stddev	418.42	56.49	73.51	55.05

	z-rastrigin-49-random-no-fips.log	z-rastrigin-49-random-no-pg.log	z-rastrigin-49-random-yes-fips.log	z-rastrigin-49-random-yes-pg.log
average	1238.25	112.09	333.13	104.77
stddev	151.70	30.99	42.47	31.53

	z-rastrigin-49-ring-no-fips.log	z-rastrigin-49-ring-no-pg.log	z-rastrigin-49-ring-yes-fips.log	z-rastrigin-49-ring-yes-pg.log
average	646.22	203.35	360.04	190.20
stddev	32.85	36.02	23.75	37.67

	z-rastrigin-49-von-no-fips.log	z-rastrigin-49-von-no-pg.log	z-rastrigin-49-von-yes-fips.log	z-rastrigin-49-von-yes-pg.log
average	662.89	120.73	433.42	123.12
stddev	33.32	27.95	45.62	31.63

Rastrigin function with swarm size = 100

	z-rastrigin-100-global-no-fips.log	z-rastrigin-100-global-no-pg.log	z-rastrigin-100-global-yes-fips.log	z-rastrigin-100-global-yes-pg.log
average	14025.90	190.97	347.54	188.01
stddev	1073.89	61.86	72.43	59.34

	z-rastrigin-100-random-no-fips.log	z-rastrigin-100-random-no-pg.log	z-rastrigin-100-random-yes-fips.log	z-rastrigin-100-random-yes-pg.log
average	3314.91	84.21	326.31	76.05
stddev	317.65	25.40	37.31	20.22

	z-rastrigin-100-ring-no-fips.log	z-rastrigin-100-ring-no-pg.log	z-rastrigin-100-ring-yes-fips.log	z-rastrigin-100-ring-yes-pg.log
average	630.31	176.76	350.91	175.71
stddev	25.67	31.58	25.33	31.21

	z-rastrigin-100-von-no-fips.log	z-rastrigin-100-von-no-pg.log	z-rastrigin-100-von-yes-fips.log	z-rastrigin-100-von-yes-pg.log
average	641.94	83.82	428.21	84.41
stddev	33.26	16.58	37.07	17.68

Rastrigin function with swarm size = 36

	z-rastrigin-36-global-no-fips.log	z-rastrigin-36-global-no-pg.log	z-rastrigin-36-global-yes-fips.log	z-rastrigin-36-global-yes-pg.log
average	2423.36	221.56	383.69	230.69
stddev	205.07	53.19	68.50	50.14

	z-rastrigin-36-random-no-fips.log	z-rastrigin-36-random-no-pg.log	z-rastrigin-36-random-yes-fips.log	z-rastrigin-36-random-yes-pg.log
average	948.56	138.54	334.41	136.43
stddev	100.79	35.10	37.56	36.71

	z-rastrigin-36-ring-no-fips.log	z-rastrigin-36-ring-no-pg.log	z-rastrigin-36-ring-yes-fips.log	z-rastrigin-36-ring-yes-pg.log
average	655.23	202.82	370.58	205.65
stddev	33.41	46.00	30.05	40.35

	z-rastrigin-36-von-no-fips.log	z-rastrigin-36-von-no-pg.log	z-rastrigin-36-von-yes-fips.log	z-rastrigin-36-von-yes-pg.log
average	667.60	141.66	437.72	140.21
stddev	43.27	35.68	53.37	36.18

Rastrigin function with swarm size = 9

	z-rastrigin-9-global-no-fips.log	z-rastrigin-9-global-no-pg.log	z-rastrigin-9-global-yes-fips.log	z-rastrigin-9-global-yes-pg.log
average	767.86	347.63	443.94	332.93
stddev	67.48	49.09	52.31	39.97

	z-rastrigin-9-random-no-fips.log	z-rastrigin-9-random-no-pg.log	z-rastrigin-9-random-yes-fips.log	z-rastrigin-9-random-yes-pg.log
average	713.01	270.52	318.02	268.47
stddev	46.50	44.50	40.03	42.83

	z-rastrigin-9-ring-no-fips.log	z-rastrigin-9-ring-no-pg.log	z-rastrigin-9-ring-yes-fips.log	z-rastrigin-9-ring-yes-pg.log
average	702.00	297.51	433.98	290.19
stddev	48.80	55.50	44.60	51.87

	z-rastrigin-9-von-no-fips.log	z-rastrigin-9-von-no-pg.log	z-rastrigin-9-von-yes-fips.log	z-rastrigin-9-von-yes-pg.log
average	710.79	295.02	446.59	287.57
stddev	48.88	46.47	54.30	50.60

Rosenbrock function with swarm size = 100

	z-rosenbrock-100-global-no-fips.log	z-rosenbrock-100-global-no-pg.log	z-rosenbrock-100-global-yes-fips.log	z-rosenbrock-100-global-yes-pg.log
average	1480004588536.62	9.94	39016877.71	16.20
stddev	283108740396.86	7.27	24834857.82	29.94

	z-rosenbrock-100-random-no-fips.log	z-rosenbrock-100-random-no-pg.log	z-rosenbrock-100-random-yes-fips.log	z-rosenbrock-100-random-yes-pg.log
average	73979109440.64	7.97	35957754.97	8.38
stddev	18564993260.39	23.37	21067368.24	22.60

	z-rosenbrock-100-ring-no-fips.log	z-rosenbrock-100-ring-no-pg.log	z-rosenbrock-100-ring-yes-fips.log	z-rosenbrock-100-ring-yes-pg.log
average	585205985.78	29.23	21541383.72	40.96
stddev	47203892.91	29.67	9782477.45	54.22

	z-rosenbrock-100-von-no-fips.log	z-rosenbrock-100-von-no-pg.log	z-rosenbrock-100-von-yes-fips.log	z-rosenbrock-100-von-yes-pg.log
average	703429424.40	16.91	2763.65	21.66
stddev	63249547.26	27.20	2797.00	34.47

Rosenbrock function with swarm size = 36

	z-rosenbrock-36-global-no-fips.log	z-rosenbrock-36-global-no-pg.log	z-rosenbrock-36-global-yes-fips.log	z-rosenbrock-36-global-yes-pg.log
average	35864314773.23	51.04	82658844.82	84.18
stddev	9439519867.46	42.95	38961521.94	169.51

	z-rosenbrock-36-random-no-fips.log	z-rosenbrock-36-random-no-pg.log	z-rosenbrock-36-random-yes-fips.log	z-rosenbrock-36-random-yes-pg.log
average	3540086451.58	63.79	59005584.91	40.47
stddev	942484130.33	78.19	32550226.97	55.91

	z-rosenbrock-36-ring-no-fips.log	z-rosenbrock-36-ring-no-pg.log	z-rosenbrock-36-ring-yes-fips.log	z-rosenbrock-36-ring-yes-pg.log
average	639546702.15	66.63	69724602.68	69.98
stddev	67605666.65	52.65	24905183.16	95.84

	z-rosenbrock-36-von-no-fips.log	z-rosenbrock-36-von-no-pg.log	z-rosenbrock-36-von-yes-fips.log	z-rosenbrock-36-von-yes-pg.log
average	761992005.81	57.32	14639062.83	43.65
stddev	95463285.34	52.75	9639430.37	49.44

Rosenbrock function with swarm size = 49

	z-rosenbrock-49-global-no-fips.log	z-rosenbrock-49-global-no-pg.log	z-rosenbrock-49-global-yes-fips.log	z-rosenbrock-49-global-yes-pg.log
average	103176074867.77	42.22	70150182.18	63.08
stddev	22311732996.09	59.00	30819172.67	100.81

	z-rosenbrock-49-random-no-fips.log	z-rosenbrock-49-random-no-pg.log	z-rosenbrock-49-random-yes-fips.log	z-rosenbrock-49-random-yes-pg.log
average	7189163998.80	20.68	48068929.38	19.81
stddev	2383075475.87	45.15	30085678.24	36.24

	z-rosenbrock-49-ring-no-fips.log	z-rosenbrock-49-ring-no-pg.log	z-rosenbrock-49-ring-yes-fips.log	z-rosenbrock-49-ring-yes-pg.log
average	632312290.84	45.26	44897899.69	84.21
stddev	56930373.81	51.64	16834008.84	104.47

	z-rosenbrock-49-von-no-fips.log	z-rosenbrock-49-von-no-pg.log	z-rosenbrock-49-von-yes-fips.log	z-rosenbrock-49-von-yes-pg.log
average	745880213.01	39.51	2304587.62	35.42
stddev	122267905.75	57.04	2206412.84	41.19

Rosenbrock function with swarm size = 9

	z-rosenbrock-9-global-no-fips.log	z-rosenbrock-9-global-no-pg.log	z-rosenbrock-9-global-yes-fips.log	z-rosenbrock-9-global-yes-pg.log
average	1692027043.42	3236661.70	213443577.15	2095110.87
stddev	410873147.92	8003663.88	65398965.46	5558656.47

	z-rosenbrock-9-random-no-fips.log	z-rosenbrock-9-random-no-pg.log	z-rosenbrock-9-random-yes-fips.log	z-rosenbrock-9-random-yes-pg.log
average	780675836.05	5834696.38	67613549.05	6252863.74
stddev	104856114.83	6448646.12	40566231.33	9446442.10

	z-rosenbrock-9-ring-no-fips.log	z-rosenbrock-9-ring-no-pg.log	z-rosenbrock-9-ring-yes-fips.log	z-rosenbrock-9-ring-yes-pg.log
average	736621164.63	899317.99	293783356.14	403252.58
stddev	56901528.21	3823594.52	67909239.82	1519286.78

	z-rosenbrock-9-von-no-fips.log	z-rosenbrock-9-von-no-pg.log	z-rosenbrock-9-von-yes-fips.log	z-rosenbrock-9-von-yes-pg.log
average	900609438.80	851787.82	196545670.35	910996.57
stddev	126726752.93	2464055.29	59566794.87	2861284.95

Sphere function with swarm size = 100

	z-sphere-100-global-no-fips.log	z-sphere-100-global-no-pg.log	z-sphere-100-global-yes-fips.log	z-sphere-100-global-yes-pg.log
average	5088838.32	0.00	31640.05	0.00
stddev	507853.22	0.00	10084.73	0.00

	z-sphere-100-random-no-fips.log	z-sphere-100-random-no-pg.log	z-sphere-100-random-yes-fips.log	z-sphere-100-random-yes-pg.log
average	1123307.63	0.00	30064.81	0.00
stddev	139963.77	0.00	9603.69	0.00

	z-sphere-100-ring-no-fips.log	z-sphere-100-ring-no-pg.log	z-sphere-100-ring-yes-fips.log	z-sphere-100-ring-yes-pg.log
average	135389.90	0.00	5309.65	0.00
stddev	9358.55	0.00	2254.20	0.00

	z-sphere-100-von-no-fips.log	z-sphere-100-von-no-pg.log	z-sphere-100-von-yes-fips.log	z-sphere-100-von-yes-pg.log
average	135605.65	0.00	208.24	0.00
stddev	11433.98	0.00	356.18	0.00

Sphere function with swarm size = 36

	z-sphere-36-global-no-fips.log	z-sphere-36-global-no-pg.log	z-sphere-36-global-yes-fips.log	z-sphere-36-global-yes-pg.log
average	777738.48	0.00	52962.86	0.26
stddev	76858.09	0.00	13201.65	1.81

	z-sphere-36-random-no-fips.log	z-sphere-36-random-no-pg.log	z-sphere-36-random-yes-fips.log	z-sphere-36-random-yes-pg.log
average	238793.67	0.00	46731.18	0.00
stddev	34211.76	0.00	13761.25	0.00

	z-sphere-36-ring-no-fips.log	z-sphere-36-ring-no-pg.log	z-sphere-36-ring-yes-fips.log	z-sphere-36-ring-yes-pg.log
average	141657.30	0.00	23755.29	0.00
stddev	11301.34	0.00	8438.80	0.00

	z-sphere-36-von-no-fips.log	z-sphere-36-von-no-pg.log	z-sphere-36-von-yes-fips.log	z-sphere-36-von-yes-pg.log
average	145904.90	0.00	14969.05	0.00
stddev	7215.71	0.00	5999.21	0.00

Sphere function with swarm size = 49

	z-sphere-49-global-no-fips.log	z-sphere-49-global-no-pg.log	z-sphere-49-global-yes-fips.log	z-sphere-49-global-yes-pg.log
average	1387847.87	0.00	48070.42	0.00
stddev	137657.60	0.00	13062.37	0.00

	z-sphere-49-random-no-fips.log	z-sphere-49-random-no-pg.log	z-sphere-49-random-yes-fips.log	z-sphere-49-random-yes-pg.log
average	329192.44	0.00	40764.89	0.00
stddev	45953.37	0.00	15173.41	0.00

	z-sphere-49-ring-no-fips.log	z-sphere-49-ring-no-pg.log	z-sphere-49-ring-yes-fips.log	z-sphere-49-ring-yes-pg.log
average	138882.87	0.00	17240.40	0.00
stddev	9876.36	0.00	7093.35	0.00

	z-sphere-49-von-no-fips.log	z-sphere-49-von-no-pg.log	z-sphere-49-von-yes-fips.log	z-sphere-49-von-yes-pg.log
average	143597.77	0.00	7078.12	0.00
stddev	8236.07	0.00	3582.35	0.00

Sphere function with swarm size = 9

	z-sphere-9-global-no-fips.log	z-sphere-9-global-no-pg.log	z-sphere-9-global-yes-fips.log	z-sphere-9-global-yes-pg.log
average	174530.12	6880.60	77680.28	6562.61
stddev	20123.28	5693.17	15450.81	5270.98

	z-sphere-9-random-no-fips.log	z-sphere-9-random-no-pg.log	z-sphere-9-random-yes-fips.log	z-sphere-9-random-yes-pg.log
average	156829.94	10533.71	32976.25	11621.90
stddev	9652.55	6683.01	9672.34	6422.13

	z-sphere-9-ring-no-fips.log	z-sphere-9-ring-no-pg.log	z-sphere-9-ring-yes-fips.log	z-sphere-9-ring-yes-pg.log
average	155896.68	395.50	85952.94	797.80
stddev	9654.75	1274.52	14238.86	1742.03

	z-sphere-9-von-no-fips.log	z-sphere-9-von-no-pg.log	z-sphere-9-von-yes-fips.log	z-sphere-9-von-yes-pg.log
average	157443.76	2713.75	74197.61	2319.74
stddev	11717.05	3841.80	11845.99	2774.60