

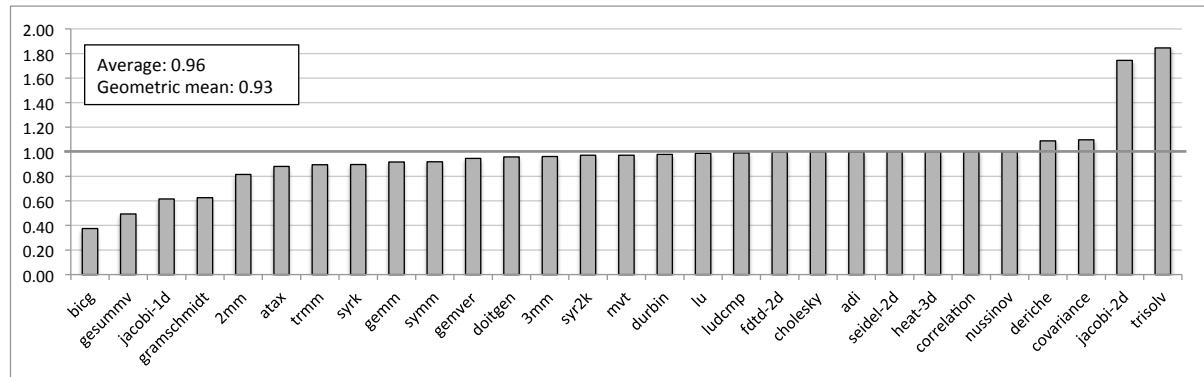
SCEV checks + LICM vs. clean Polly

GOAL: show how SCEV checks combined with LICM improve Polly

BASE: llvm -O3 + old version of Polly

OPT: same as base plus SCEV alias checks with LICM

benchmark	base	opt	opt/base
bicg	0.0151125	0.005667167	0.37
gesummv	0.006503333	0.003206333	0.49
jacobi-1d	0.001668667	0.001026833	0.62
gramschmidt	9.442629333	5.904995833	0.63
2mm	2.804883	2.2844885	0.81
atax	0.008420167	0.007411333	0.88
trmm	1.344646667	1.203167333	0.89
syrk	1.087987667	0.974482667	0.90
gemm	0.873808	0.801753667	0.92
symm	2.898570167	2.661241	0.92
gemver	0.0250005	0.023657333	0.95
doitgen	0.829474167	0.795179167	0.96
3mm	4.5513795	4.378582333	0.96
syr2k	7.589394	7.376399833	0.97
mvt	0.017228	0.016752667	0.97
durbin	0.004519667	0.004425	0.98
lu	5.152724167	5.090455167	0.99
ludcmp	4.438292667	4.399549667	0.99
fdtd-2d	3.140064333	3.130938667	1.00
cholesky	1.760715833	1.758651667	1.00
adi	23.83490483	23.8081995	1.00
seidel-2d	32.83085683	32.8435035	1.00
heat-3d	4.617450167	4.619458833	1.00
correlation	3.697777167	3.6993865	1.00
nussinov	3.974065	3.977054333	1.00
deriche	0.2398985	0.261413333	1.09
covariance	3.519671167	3.863274667	1.10
jacobi-2d	3.1143295	5.429568667	1.74
trisolv	0.002902833	0.0053555	1.84



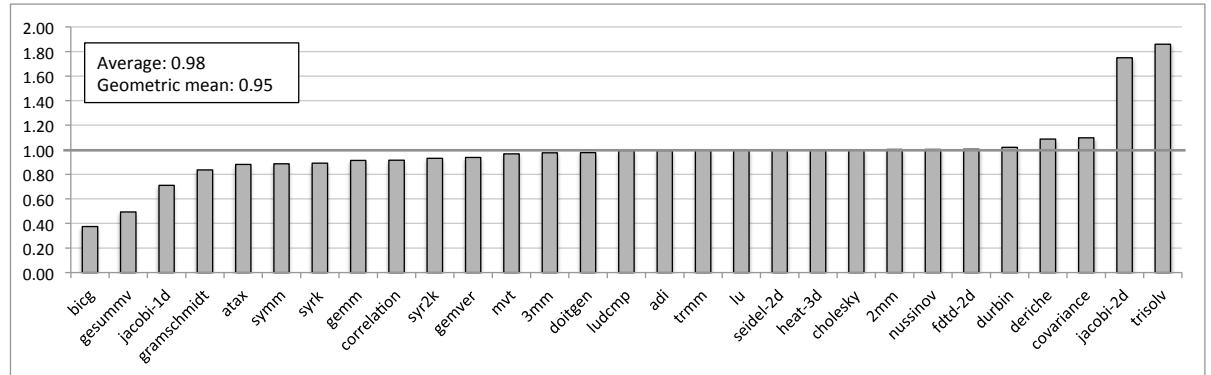
SCEV checks + LICM vs. clean Polly (fusion=max)

GOAL: show how SCEV checks combined with LICM improve Polly when using fusion=max

BASE: llvm -O3 + old version of Polly + fusion=max

OPT: same as base plus SCEV alias checks with LICM

benchmark	base	opt	opt/base
bicg	0.0151125	0.005666	0.37
gesummv	0.006502167	0.003215167	0.49
jacobi-1d	0.0014495	0.0010305	0.71
gramschmidt	8.027411167	6.706057833	0.84
atax	0.008421667	0.007423333	0.88
symm	2.89112	2.562189333	0.89
syrk	1.0977375	0.978149333	0.89
gemm	0.875524667	0.799107	0.91
correlation	3.8632115	3.532688833	0.91
syr2k	8.535683333	7.949151833	0.93
gemver	0.024969167	0.023415667	0.94
mvt	0.017306667	0.01674	0.97
3mm	4.710738167	4.596074667	0.98
doitgen	0.829488333	0.810690333	0.98
ludcmp	4.435137	4.408448333	0.99
adi	23.89252633	23.774714	1.00
trmm	1.268290333	1.262444333	1.00
lu	5.132042833	5.1111435	1.00
seidel-2d	32.90166183	32.83514283	1.00
heat-3d	4.624826	4.616511	1.00
cholesky	1.7667115	1.763794333	1.00
2mm	2.805895667	2.812225167	1.00
nussinov	3.972142333	3.985757	1.00
fdtd-2d	3.127138833	3.1421795	1.00
durbin	0.004228333	0.004313833	1.02
deriche	0.242509833	0.2636415	1.09
covariance	3.525075833	3.867981667	1.10
jacobi-2d	3.1023925	5.4277105	1.75
trisolv	0.002898167	0.005388333	1.86



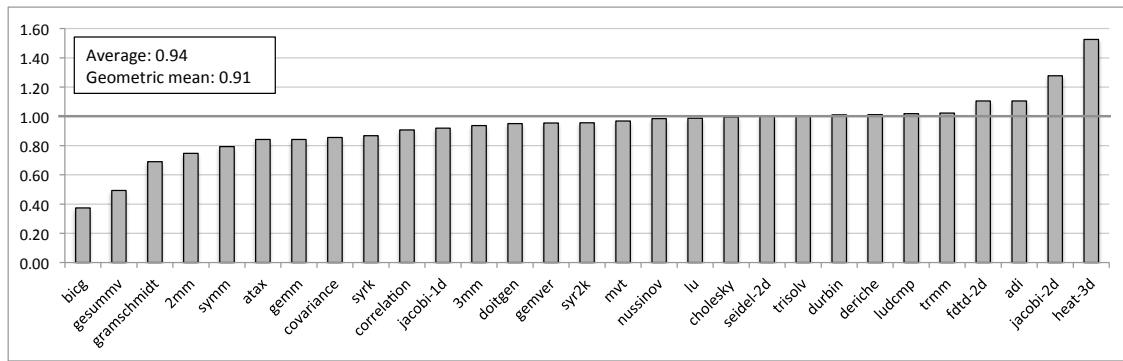
SCEV checks + LICM vs. clean LLVM -O3 (LARGE)

GOAL: verify how SCEV checks combined with LICM improves traditional LLVM -O3 when running the LARGE dataset

BASE: (old) LLVM -O3 +LARGE_DATASET

OPT: (old) LLVM -O3 + SCEV checks (no Polly optimizations) + LICM + LARGE_DATASET

benchmark	base	opt	opt/base
bicg	0.015102167	0.005651	0.37
gesummv	0.006508	0.003211667	0.49
gramschmidt	8.099863	5.587002667	0.69
2mm	3.057143	2.2841055	0.75
symm	3.280664167	2.601714	0.79
atax	0.008427	0.007097	0.84
gemm	0.889227667	0.749021667	0.84
covariance	3.725316	3.1845545	0.85
syrk	1.104618333	0.957628167	0.87
correlation	3.894781833	3.532742833	0.91
jacobi-1d	0.001626333	0.001493833	0.92
3mm	4.508841	4.222736	0.94
doitgen	0.823203	0.7820965	0.95
gemver	0.024486167	0.023375667	0.95
syr2k	7.131391167	6.812838667	0.96
mvt	0.017313	0.016756167	0.97
nussinov	4.0596705	3.9958215	0.98
lu	5.268812833	5.197298833	0.99
cholesky	1.774548	1.7666075	1.00
seidel-2d	32.81697983	32.81826983	1.00
trisolv	0.002901667	0.002905833	1.00
durbin	0.004250833	0.0042915	1.01
deriche	0.2391715	0.241952	1.01
ludcmp	4.396130667	4.4782115	1.02
trmm	1.257440667	1.285545167	1.02
fddt-2d	3.150448667	3.482177	1.11
adi	21.64987983	23.93909417	1.11
jacobi-2d	3.017519833	3.852699	1.28
heat-3d	4.634492333	7.070118167	1.53



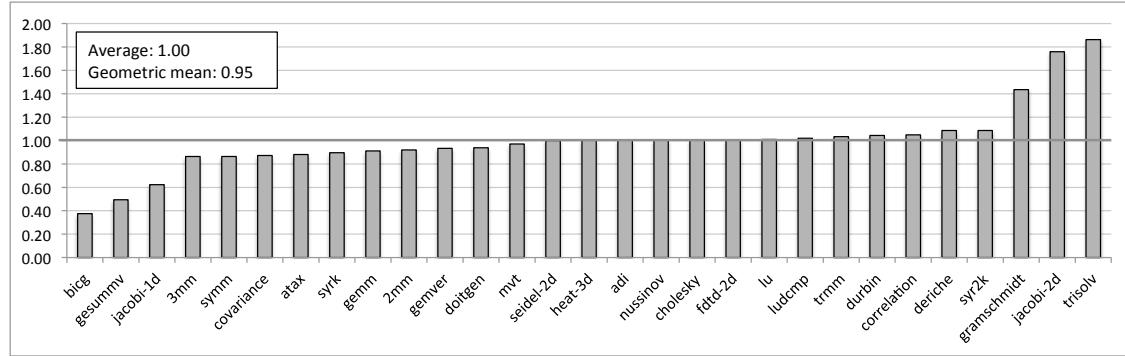
SCEV checks + LICM vs. old Polly (LARGE)

GOAL: verify how SCEV checks combined with LICM improves Polly when running the LARGE dataset

BASE: Polly (old) + LARGE_DATASET flag

OPT: Same as base + SCEV checks + LICM

benchmark	base	opt	opt/base
bicg	0.015101167	0.005663167	0.38
gesummv	0.006503167	0.003209667	0.49
jacobi-1d	0.0016605	0.001033333	0.62
3mm	4.697870667	4.0575175	0.86
symm	3.063035333	2.648378	0.86
covariance	4.031221333	3.516069667	0.87
atax	0.008419333	0.007420833	0.88
syrk	1.094426	0.981050167	0.90
gemm	0.879318667	0.800784	0.91
2mm	3.063759	2.817132833	0.92
gemver	0.025096667	0.0234445	0.93
doitgen	0.8319515	0.780217333	0.94
mvt	0.0173	0.016805333	0.97
seidel-2d	32.8325915	32.83320917	1.00
heat-3d	4.616679167	4.6196615	1.00
adi	23.82095333	23.87456	1.00
nussinov	3.951532167	3.962387167	1.00
cholesky	1.756823667	1.763482167	1.00
fdtd-2d	3.138659667	3.154248	1.00
lu	5.1080085	5.161653333	1.01
ludcmp	4.371311	4.456060167	1.02
trmm	1.262840833	1.306262833	1.03
durbin	0.004417667	0.004608167	1.04
correlation	3.5323175	3.7027635	1.05
deriche	0.239703833	0.2601805	1.09
syr2k	7.409149167	8.046042167	1.09
gramschmidt	5.6824955	8.160573833	1.44
jacobi-2d	3.1044425	5.461781833	1.76
trisolv	0.002888167	0.005379833	1.86



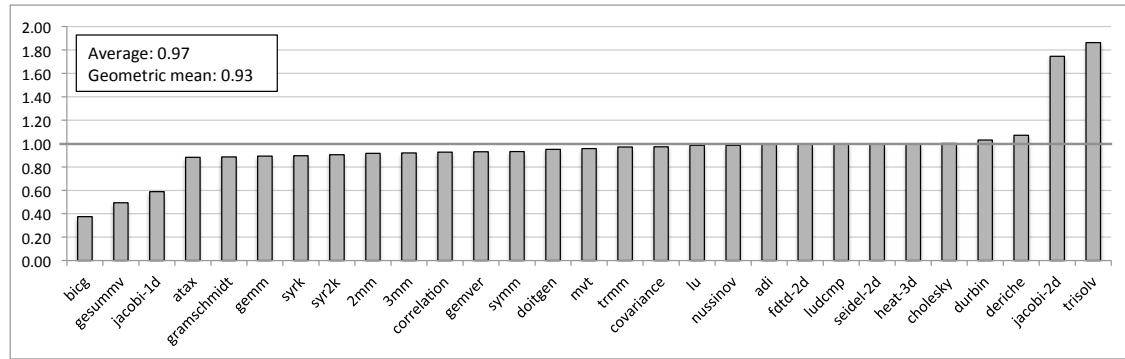
SCEV checks + LICM vs. old Polly (LARGE) (fusion=max)

GOAL: verify how SCEV checks combined with LICM improves Polly when running the LARGE dataset with fusion=max

BASE: Polly (old) + fusion=max + LARGE_DATASET flag

OPT: Same as base + SCEV checks + LICM

benchmark	base	opt	opt/base
bicg	0.015096	0.005660333	0.37
gesummv	0.006498167	0.003211333	0.49
jacobi-1d	0.0016875	0.0009935	0.59
atax	0.008413667	0.007420167	0.88
gramschmidt	8.103430167	7.178489	0.89
gemm	0.896024333	0.799503333	0.89
syrk	1.092513667	0.979621167	0.90
syr2k	8.239232667	7.450813	0.90
2mm	3.076854333	2.822667	0.92
3mm	4.533623	4.170215167	0.92
correlation	3.8181785	3.540995833	0.93
gemver	0.025349833	0.023571	0.93
symm	2.867397167	2.671279833	0.93
doitgen	0.8363115	0.794559167	0.95
mvt	0.0175565	0.016805333	0.96
trmm	1.335285333	1.296007167	0.97
covariance	3.963894833	3.8577335	0.97
lu	5.1338465	5.052090833	0.98
nussinov	4.032026667	3.9702875	0.98
adi	23.86884017	23.68095017	0.99
fdtd-2d	3.158322833	3.138534833	0.99
ludcmp	4.401071667	4.398722	1.00
seidel-2d	32.8348555	32.8342435	1.00
heat-3d	4.615309333	4.615638	1.00
cholesky	1.758973833	1.760202	1.00
durbin	0.004421667	0.004555833	1.03
deriche	0.246122667	0.263658167	1.07
jacobi-2d	3.109462667	5.429427833	1.75
trisolv	0.002892833	0.005389	1.86



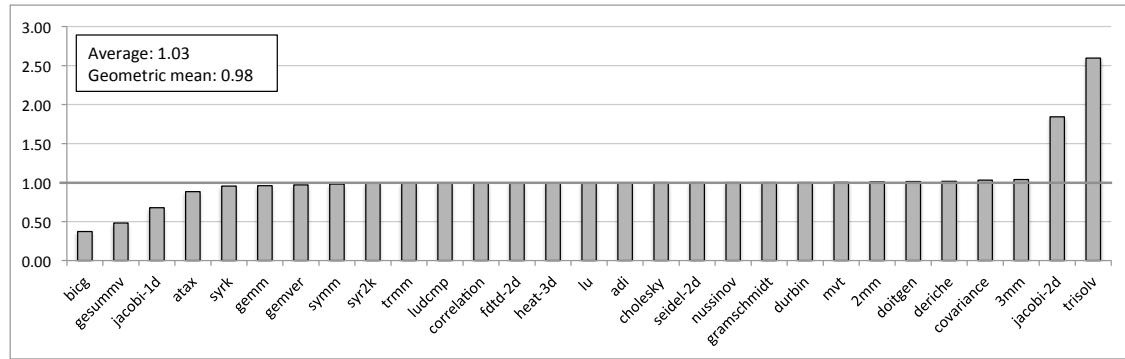
SCEV checks + LICM vs. old Polly (EXTRALARGE)

GOAL: verify how SCEV checks combined with LICM improves Polly when running the EXTRALARGE dataset

BASE: Polly (old) + EXTRALARGE_DATASET flag

OPT: Same as base + SCEV checks + LICM

benchmark	base	opt	opt/base
bicg	0.015151167	0.005655	0.37
gesummv	0.029860667	0.014386667	0.48
jacobi-1d	0.006795667	0.0045975	0.68
atax	0.008416667	0.0074355	0.88
syrk	19.52662483	18.66135367	0.96
gemm	10.66924917	10.23954483	0.96
gemver	0.1044055	0.10133	0.97
symm	29.51007767	28.90440933	0.98
syr2k	94.282944	93.53206667	0.99
trmm	19.8648345	19.71027467	0.99
ludcmp	71.66651133	71.40997183	1.00
correlation	55.41896767	55.32648917	1.00
fdtd-2d	29.0462755	29.002986	1.00
heat-3d	42.799914	42.76470633	1.00
lu	75.31919717	75.26888483	1.00
adi	192.1308905	192.0251902	1.00
cholesky	14.91336183	14.91366283	1.00
seidel-2d	263.2687047	263.2784823	1.00
nussinov	80.27872233	80.28871817	1.00
gramschmidt	45.489558	45.51817467	1.00
durbin	0.0177955	0.017826167	1.00
mvt	0.0790305	0.079261667	1.00
2mm	38.5650715	38.90590717	1.01
doitgen	5.6686725	5.7482565	1.01
deriche	2.903513	2.949773833	1.02
covariance	53.62266067	55.28328083	1.03
3mm	107.5886748	111.8379305	1.04
jacobi-2d	29.02715233	53.49896483	1.84
trisolv	0.011219167	0.029141833	2.60



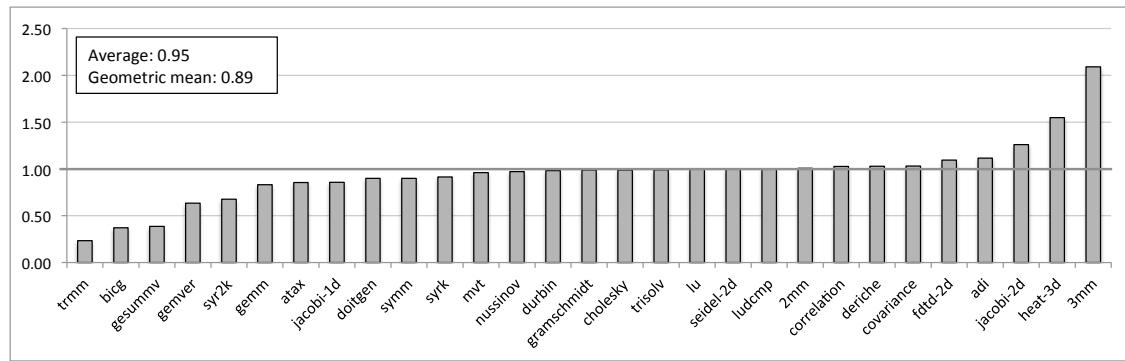
SCEV checks + LICM vs. clean LLVM -O3 (EXTRALARGE)

GOAL: verify how SCEV checks combined with LICM improves traditional LLVM -O3 when running the EXTRALARGE dataset

BASE: (old) LLVM -O3 + EXTRALARGE_DATASET

OPT: (old) LLVM -O3 + SCEV checks (no Polly optimizations) + LICM + EXTRALARGE_DATASET

benchmark	base	opt	opt/base
trmm	83.240523	19.42139183	0.23
bicg	0.015152833	0.0056395	0.37
gesummv	0.037366	0.0144385	0.39
gemver	0.157652167	0.100114167	0.64
syr2k	135.9415448	91.964793	0.68
gemm	11.8043135	9.823947333	0.83
atax	0.008411167	0.007200167	0.86
jacobi-1d	0.006827667	0.005847833	0.86
doitgen	6.356598833	5.715667667	0.90
symm	32.10413617	28.91410183	0.90
syrk	19.87142	18.160467	0.91
mvt	0.08098	0.077784	0.96
nussinov	82.31573967	80.06901067	0.97
durbin	0.017855667	0.017528333	0.98
gramschmidt	45.75305317	45.25678117	0.99
cholesky	15.15164667	14.996092	0.99
trisolv	0.0113215	0.011221333	0.99
lu	75.50775667	75.40599267	1.00
seidel-2d	263.1164997	263.0417418	1.00
ludcmp	71.279088	71.48986383	1.00
2mm	38.58864717	38.85720967	1.01
correlation	53.51020983	55.0032115	1.03
deriche	2.842995667	2.924982167	1.03
covariance	53.458094	55.15470933	1.03
fdtd-2d	28.88832633	31.5971055	1.09
adi	174.0874268	194.4231833	1.12
jacobi-2d	28.04348767	35.36305617	1.26
heat-3d	42.8379495	66.29366617	1.55
3mm	53.70868233	112.3395178	2.09



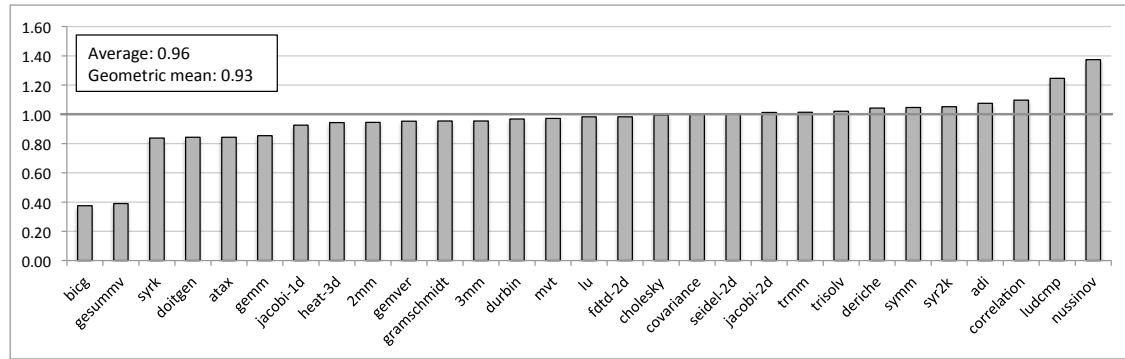
ISL checks vs. clean LLVM -O3 (LARGE)

GOAL: verify how ISL checks improves traditional LLVM -O3 when running the LARGE dataset

BASE: (new) LLVM -O3 +LARGE_DATASET

OPT: (new) LLVM -O3 + ISL checks (no Polly optimizations) + LARGE_DATASET

benchmark	base	opt	opt/base
bicg	0.0151055	0.005667167	0.38
gesummv	0.0065055	0.002539	0.39
syrk	1.095921667	0.9185195	0.84
doitgen	0.846269333	0.713713333	0.84
atax	0.008412667	0.007098833	0.84
gemm	0.875481	0.747234833	0.85
jacobi-1d	0.001655333	0.001533833	0.93
heat-3d	4.624652667	4.364734333	0.94
2mm	3.023496167	2.8588495	0.95
gemver	0.024655833	0.023510333	0.95
gramschmidt	9.591340667	9.1501265	0.95
3mm	4.539493	4.334435833	0.95
durbin	0.004504333	0.004359667	0.97
mvt	0.017289167	0.016798333	0.97
lu	5.284233667	5.192641	0.98
fdtd-2d	3.134719667	3.081800167	0.98
cholesky	1.775971833	1.768345	1.00
covariance	3.870041667	3.8684755	1.00
seidel-2d	32.81575083	32.81461633	1.00
jacobi-2d	3.0164695	3.053626667	1.01
trmm	1.205407667	1.223037333	1.01
trisolv	0.002892833	0.002951667	1.02
deriche	0.229293	0.2391945	1.04
symm	2.5941885	2.713790833	1.05
syr2k	7.646105833	8.049196833	1.05
adi	21.72928533	23.35639683	1.07
correlation	3.3812195	3.709693	1.10
ludcmp	4.413973	5.500228333	1.25
nussinov	4.045788167	5.558945	1.37



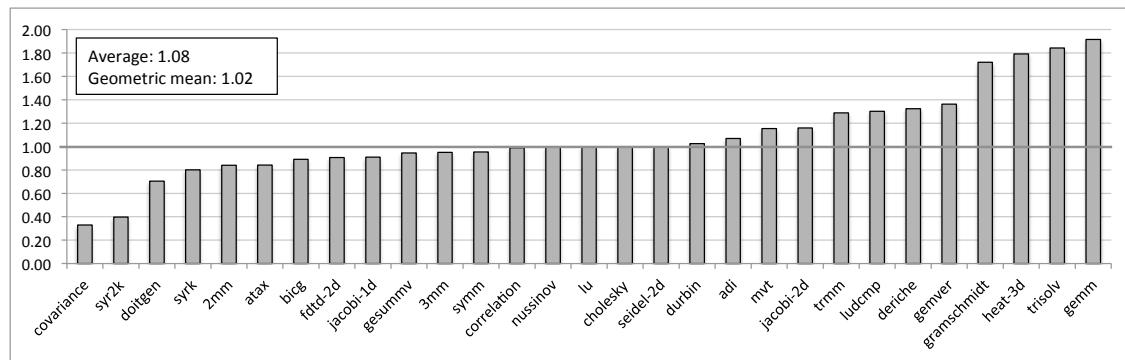
ISL checks using LARGE_DATASET (fusion=max)

GOAL: show how ISL checks improve Polly when using the LARGE_DATASET with fusion=max

BASE: newest version of Polly + PolyBench LARGE_DATASET + fusion=max

OPT: same as base using ISL checks

benchmark	base	opt	opt/base
covariance	3.8808015	1.278205667	0.33
syr2k	8.5242185	3.385093333	0.40
doitgen	0.837686	0.589973667	0.70
syrk	1.093960833	0.876201833	0.80
2mm	3.033384833	2.547014667	0.84
atax	0.0084255	0.007096167	0.84
bicg	0.0151005	0.013448833	0.89
fddt-2d	3.122678833	2.831733167	0.91
jacobi-1d	0.0016375	0.001490833	0.91
gesummv	0.006500167	0.006146667	0.95
3mm	4.373080833	4.160034333	0.95
symm	2.8993665	2.765306833	0.95
correlation	3.718447333	3.6800745	0.99
nussinov	5.591898	5.580474833	1.00
lu	3.854456667	3.850568167	1.00
cholesky	1.767110333	1.76628	1.00
seidel-2d	31.71475083	31.717887783	1.00
durbin	0.004333167	0.004440333	1.02
adi	21.5649395	23.0443505	1.07
mvt	0.017278167	0.019933167	1.15
jacobi-2d	3.017222	3.496597	1.16
trmm	1.208102833	1.555927667	1.29
ludcmp	4.420082833	5.7527025	1.30
deriche	0.228015167	0.302013167	1.32
gemver	0.024505167	0.033394333	1.36
gramschmidt	5.430820333	9.346849333	1.72
heat-3d	4.608940667	8.260977333	1.79
trisolv	0.002893167	0.005332333	1.84
gemm	0.874027333	1.673986667	1.92



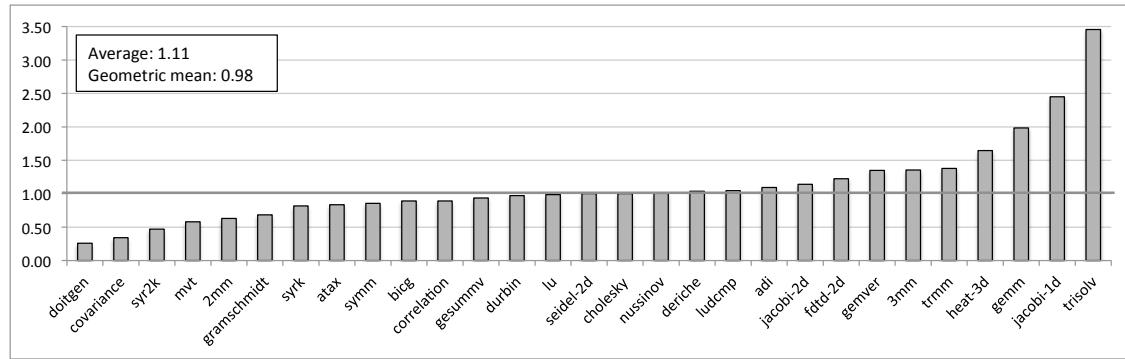
ISL checks using PolyBench scalar bounds and stripmine (LARGE_DATASET fusion=max)

GOAL: test if scalar bounds and stripmining improve the performance of ISL checks when using fusion=max and LARGE dataset

BASE: llvm -O3 + newest version of Polly + PolyBench 4.0 SCALAR_BOUNDS flag + -poly-vectorizer=stripmine + LARGE_DATASET + fusion=max

OPT: same as base with ISL alias checks

benchmark	base	opt	opt/base
doitgen	0.837404667	0.217716	0.26
covariance	4.117144667	1.405005	0.34
syr2k	7.659863333	3.610041167	0.47
mvt	0.017478167	0.0101125	0.58
2mm	2.785575167	1.7549985	0.63
gramschmidt	9.806818167	6.703305833	0.68
syrk	1.112907	0.908907667	0.82
atax	0.008410667	0.0070145	0.83
symm	3.007746167	2.571632167	0.86
bicg	0.0151005	0.0134665	0.89
correlation	3.941869833	3.517863667	0.89
gesummv	0.006498667	0.0060905	0.94
durbin	0.011640667	0.011298167	0.97
lu	8.709864	8.585973167	0.99
seidel-2d	31.70442683	31.70472767	1.00
cholesky	1.780738833	1.785361	1.00
nussinov	4.836856333	4.859126	1.00
deriche	0.236685	0.245201167	1.04
ludcmp	5.5654965	5.8246705	1.05
adi	21.55291017	23.55036683	1.09
jacobi-2d	3.0303315	3.457826333	1.14
fdtd-2d	3.154577667	3.859309	1.22
gemver	0.024688833	0.0333105	1.35
3mm	4.349295667	5.887127	1.35
trmm	1.216564	1.677998	1.38
heat-3d	4.6070105	7.577832667	1.64
gemm	0.845549833	1.677552	1.98
jacobi-1d	0.0016725	0.004099333	2.45
trisolv	0.002893	0.0099995	3.46



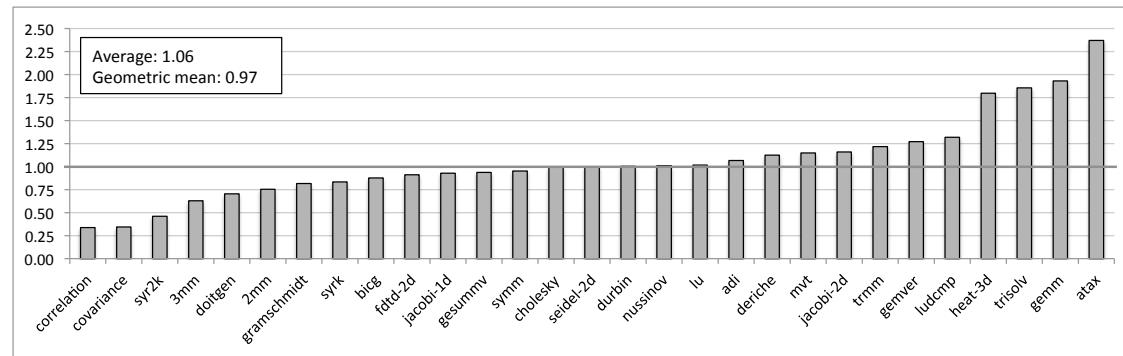
ISL vs. Polly (computeout=999999)

GOAL: verify how ISL checks improve Polly when using computeout=999999

BASE: newest Polly + dependences-computeout=999999

OPT: same as base + ISL checks

benchmark	base	opt	opt/base
correlation	3.7985485	1.279905167	0.34
covariance	3.717113833	1.277617833	0.34
syr2k	7.370773667	3.387854167	0.46
3mm	4.8293675	3.038096667	0.63
doitgen	0.840259167	0.5923175	0.70
2mm	2.774048167	2.094107	0.75
gramschmidt	6.917891833	5.6461815	0.82
syrk	1.087761333	0.9074075	0.83
bicg	0.015111167	0.013247333	0.88
fddt-2d	3.114507667	2.837603	0.91
jacobi-1d	0.001642	0.001526	0.93
gesummv	0.006501	0.006096	0.94
symm	2.709085333	2.581587	0.95
cholesky	1.774089667	1.770501167	1.00
seidel-2d	31.71569517	31.71612317	1.00
durbin	0.004360167	0.004377	1.00
nussinov	5.607054	5.661281333	1.01
lu	9.058897167	9.217481333	1.02
adi	21.66387833	23.11505217	1.07
deriche	0.229925333	0.2588285	1.13
mvt	0.017260167	0.019823333	1.15
jacobi-2d	3.0186	3.497668667	1.16
trmm	1.268917333	1.5445275	1.22
gemver	0.024662	0.031349833	1.27
ludcmp	4.421668167	5.835789833	1.32
heat-3d	4.624481	8.3107335	1.80
trisolv	0.002893333	0.005372333	1.86
gemm	0.877507667	1.694864833	1.93
atax	0.0084155	0.019956333	2.37



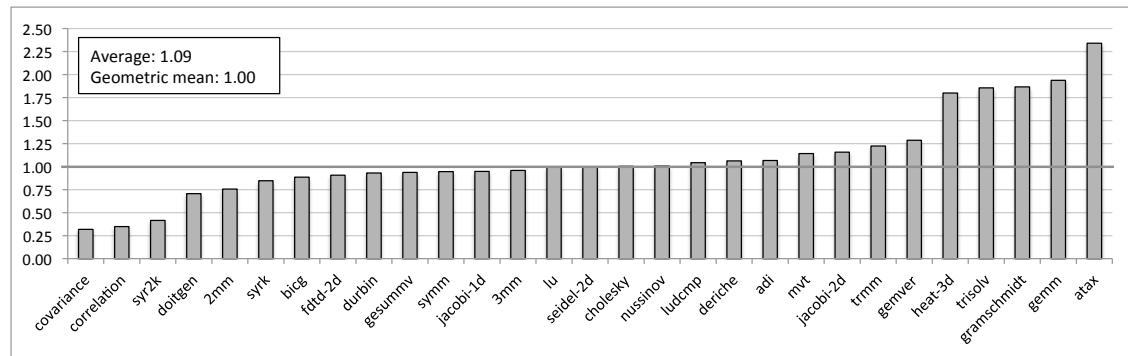
ISL vs. Polly (detect-parallel)

GOAL: verify how ISL checks improve Polly when using detect-parallel

BASE: newest Polly + ast-detect-parallel

OPT: same as base + ISL checks

benchmark	base	opt	opt/base
covariance	4.046025	1.290773333	0.32
correlation	3.715930333	1.294527	0.35
syr2k	8.174124833	3.386584167	0.41
doitgen	0.837124667	0.591158833	0.71
2mm	2.771939167	2.0964095	0.76
syrk	1.076964667	0.9119035	0.85
bicg	0.015104333	0.013383167	0.89
fddt-2d	3.131533333	2.839166167	0.91
durbin	0.004938833	0.004596167	0.93
gesummv	0.006499	0.00609	0.94
symm	3.039607833	2.875912	0.95
jacobi-1d	0.0016315	0.001545333	0.95
3mm	4.618471833	4.423573833	0.96
lu	8.320440833	8.262321667	0.99
seidel-2d	31.71505667	31.71631483	1.00
cholesky	1.782275167	1.788006833	1.00
nussinov	4.339927333	4.367921167	1.01
ludcmp	5.5487045	5.784885667	1.04
deriche	0.233971333	0.2484675	1.06
adi	21.659433	23.08072833	1.07
mvt	0.017299333	0.019745333	1.14
jacobi-2d	3.0187575	3.494928167	1.16
trmm	1.253215167	1.533999167	1.22
gemver	0.024546	0.031583	1.29
heat-3d	4.616488833	8.308910667	1.80
trisolv	0.002895333	0.005376	1.86
gramschmidt	4.215795667	7.868680167	1.87
gemm	0.874147	1.694491333	1.94
atax	0.008421667	0.019720667	2.34



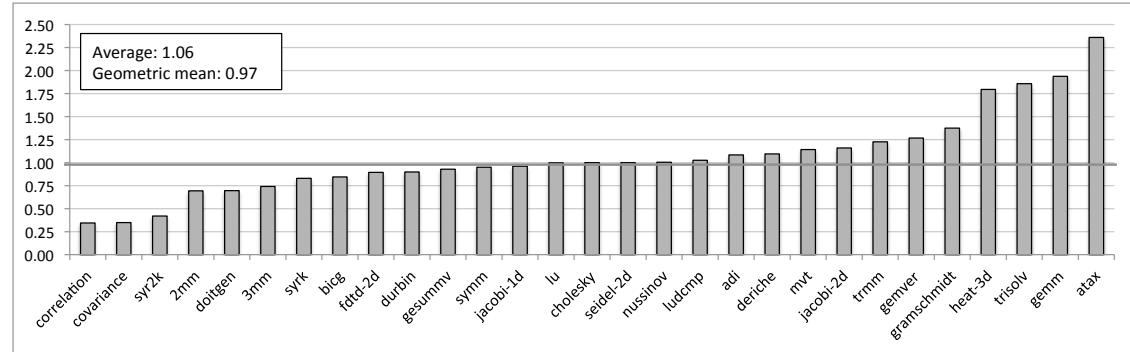
ISL vs. Polly (computeout=999999 + detect-parallel)

GOAL: verify how ISL checks improve Polly when using computeout=999999 + detect-parallel

BASE: newest Polly + dependences-computeout=999999 + ast-detect-parallel

OPT: same as base + ISL checks

benchmark	base	opt	opt/base
correlation	3.721310667	1.2828785	0.34
covariance	3.704392167	1.290800833	0.35
syr2k	8.063452333	3.386850667	0.42
2mm	3.0228285	2.094387	0.69
doitgen	0.856945	0.596762167	0.70
3mm	4.37329	3.2365475	0.74
syrk	1.098473667	0.910176333	0.83
bicg	0.015110333	0.012762833	0.84
fdtd-2d	3.1690875	2.834484667	0.89
durbin	0.004856667	0.004361833	0.90
gesummv	0.006501833	0.0060415	0.93
symm	2.989458167	2.840697	0.95
jacobi-1d	0.001608833	0.001545833	0.96
lu	8.275192667	8.26215	1.00
cholesky	1.788421333	1.7883115	1.00
seidel-2d	31.71580567	31.71922733	1.00
nussinov	4.3839155	4.405665	1.00
ludcmp	5.588529833	5.730608	1.03
adi	21.30129617	23.0742895	1.08
deriche	0.229166667	0.251079167	1.10
mvt	0.017264667	0.019731	1.14
jacobi-2d	3.020786667	3.503489667	1.16
trmm	1.251623167	1.533503333	1.23
gemver	0.024452167	0.0309655	1.27
gramschmidt	6.770967667	9.311389167	1.38
heat-3d	4.610537167	8.2760435	1.80
trisolv	0.002895	0.005377167	1.86
gemm	0.874842	1.695239333	1.94
atax	0.008417333	0.019875333	2.36



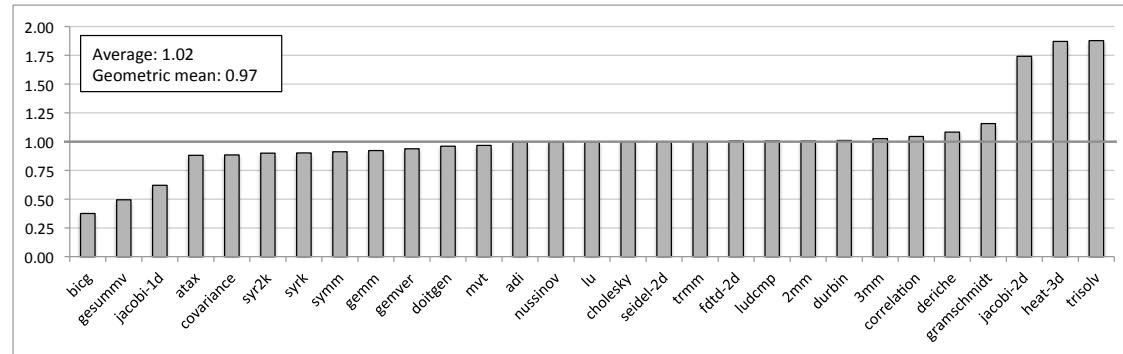
SCEV+LICM vs. Polly (computeout=999999)

GOAL: verify how SCEV checks with LICM improve Polly when using computeout=999999

BASE: old Polly + dependences-computeout=999999

OPT: same as base + SCEV checks + LICM

benchmark	base	opt	opt/base
bicg	0.015105833	0.005677667	0.38
gesummv	0.006497167	0.003209	0.49
jacobi-1d	0.001696	0.001053167	0.62
atax	0.008414167	0.007417833	0.88
covariance	4.2501585	3.7589055	0.88
syr2k	8.202035167	7.376021333	0.90
syrk	1.091564333	0.984720333	0.90
symm	2.810484833	2.563431833	0.91
gemm	0.889552667	0.820044167	0.92
gemver	0.025154833	0.023601167	0.94
doitgen	0.8383825	0.804824167	0.96
mvt	0.0174715	0.016894	0.97
adi	23.78393583	23.64062833	0.99
nussinov	4.019933	4.000784667	1.00
lu	5.163556333	5.1460535	1.00
cholesky	1.7614845	1.761342	1.00
seidel-2d	32.8355345	32.83731317	1.00
trmm	1.2189105	1.219462333	1.00
fdtd-2d	3.156868167	3.171889167	1.00
ludcmp	4.429196	4.452867	1.01
2mm	2.813281	2.8296885	1.01
durbin	0.0044495	0.004493833	1.01
3mm	4.372940167	4.484013333	1.03
correlation	3.7715975	3.937830333	1.04
deriche	0.244785167	0.264849833	1.08
gramschmidt	7.1036655	8.212655833	1.16
jacobi-2d	3.130138667	5.453572333	1.74
heat-3d	4.621391167	8.647766	1.87
trisolv	0.002890333	0.005429333	1.88



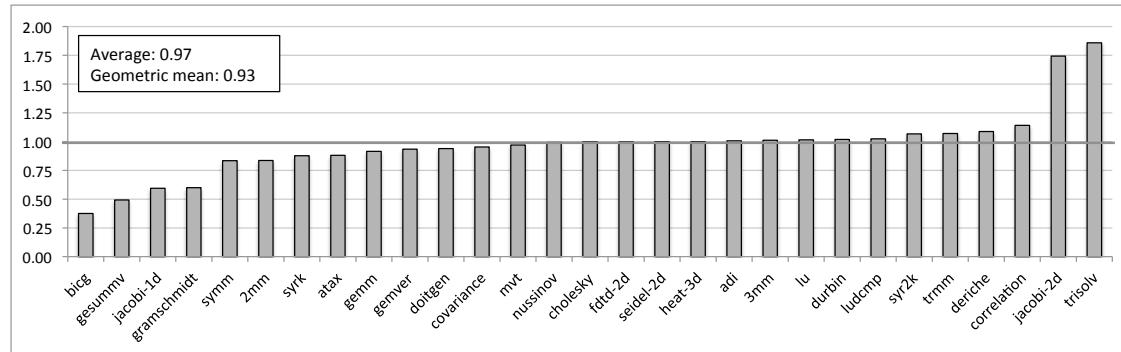
SCEV+LICM vs. Polly (detect-parallel)

GOAL: verify how SCEV checks with LICM improve Polly when using detect-parallel

BASE: old Polly + ast-detect-parallel

OPT: same as base + SCEV checks + LICM

benchmark	base	opt	opt/base
bicg	0.015098667	0.005677167	0.38
gesummv	0.006501333	0.003205	0.49
jacobi-1d	0.001694	0.001005833	0.59
gramschmidt	8.339245667	4.997019	0.60
symm	3.0884185	2.575780833	0.83
2mm	3.071749667	2.5660595	0.84
syrk	1.117501667	0.980167833	0.88
atax	0.008421833	0.007417	0.88
gemm	0.888414833	0.813100333	0.92
gemver	0.025195	0.023532167	0.93
doitgen	0.84211	0.790753333	0.94
covariance	3.929917333	3.744427167	0.95
mvt	0.017432	0.0169285	0.97
nussinov	4.020278167	3.994872	0.99
cholesky	1.766226667	1.7626335	1.00
fdtd-2d	3.147213	3.141981833	1.00
seidel-2d	32.83566017	32.83477	1.00
heat-3d	4.619432	4.620996167	1.00
adi	23.7557355	23.92960467	1.01
3mm	4.195613833	4.246080667	1.01
lu	5.139734667	5.218695167	1.02
durbin	0.0044095	0.004493667	1.02
ludcmp	4.3799625	4.482454167	1.02
syr2k	7.871086167	8.400196833	1.07
trmm	1.203259333	1.287391	1.07
deriche	0.241991833	0.263432167	1.09
correlation	3.4303175	3.915223833	1.14
jacobi-2d	3.1143295	5.428694167	1.74
trisolv	0.002898	0.005389167	1.86



SCEV+LICM vs. Polly (computeout=999999 + detect-parallel)

GOAL: verify how SCEV checks with LICM improve Polly when using computeout=999999 + detect-parallel

BASE: old Polly + dependences-computeout=999999 + ast-detect-parallel

OPT: same as base + SCEV checks + LICM

benchmark	base	opt	opt/base
bicg	0.015107833	0.005682667	0.38
gesummv	0.0065055	0.003207167	0.49
jacobi-1d	0.001632167	0.001052333	0.64
gramschmidt	5.6966015	4.772015167	0.84
3mm	4.599406667	3.945595667	0.86
atax	0.0084175	0.007420833	0.88
symm	2.921257667	2.6132785	0.89
syrk	1.0954785	0.989481333	0.90
2mm	2.810944	2.5616305	0.91
covariance	4.085686833	3.760074667	0.92
gemm	0.886308333	0.818908	0.92
gemver	0.025197833	0.023598167	0.94
mvt	0.0174535	0.016907333	0.97
doitgen	0.831778833	0.809437167	0.97
durbin	0.0043885	0.004288833	0.98
nussinov	4.071911333	3.998744167	0.98
adi	23.7920185	23.69818017	1.00
cholesky	1.7665395	1.7626725	1.00
seidel-2d	32.83528417	32.834414	1.00
lu	5.135341333	5.136223667	1.00
fdtd-2d	3.130048333	3.158527667	1.01
ludcmp	4.394197167	4.4981585	1.02
trmm	1.2006045	1.237545333	1.03
correlation	3.7685785	3.936591333	1.04
syr2k	7.380771833	8.031474833	1.09
deriche	0.242541167	0.2685295	1.11
jacobi-2d	3.113689	5.439295667	1.75
heat-3d	4.615629167	8.6541485	1.87
trisolv	0.002888833	0.0054165	1.87

