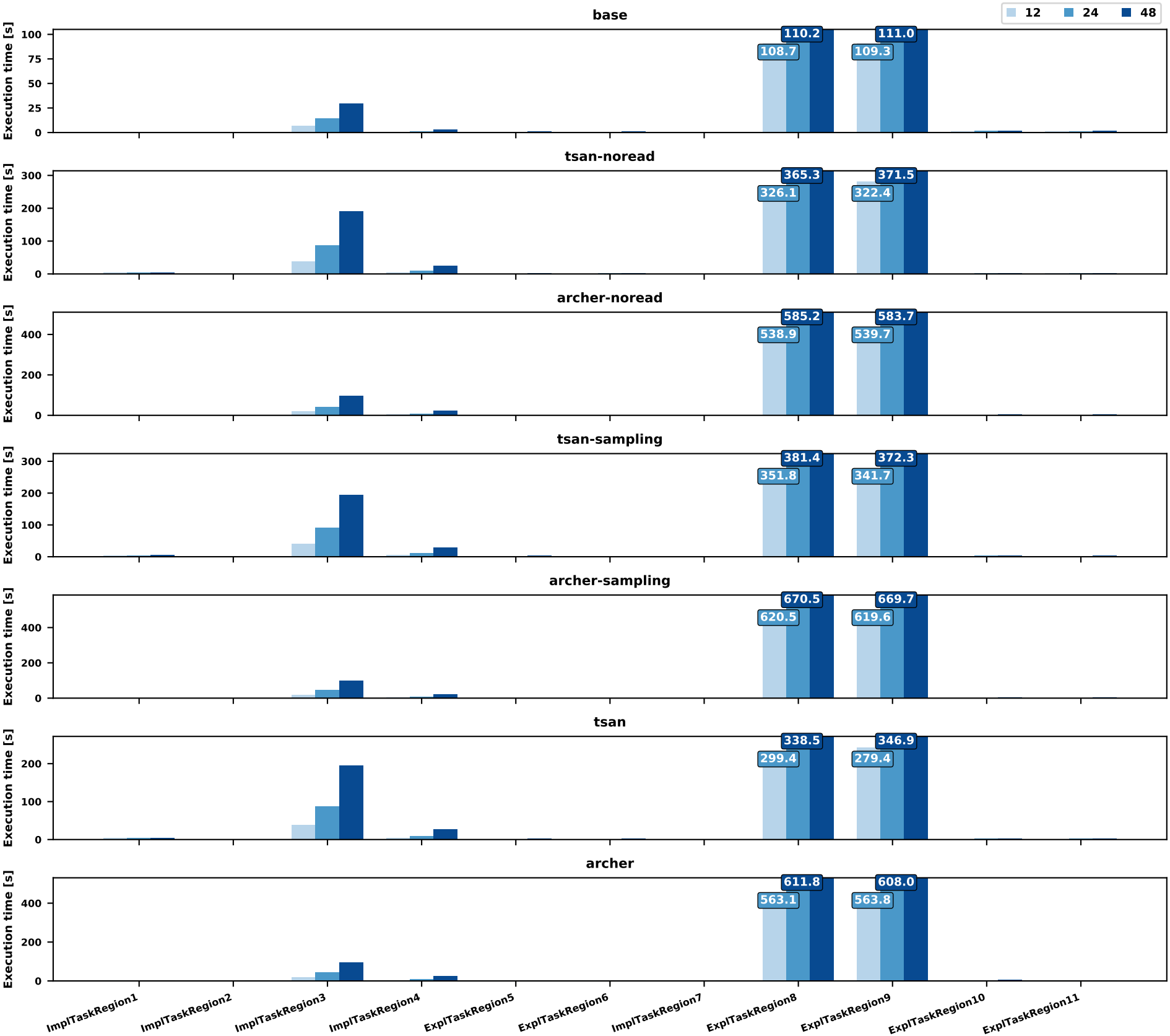
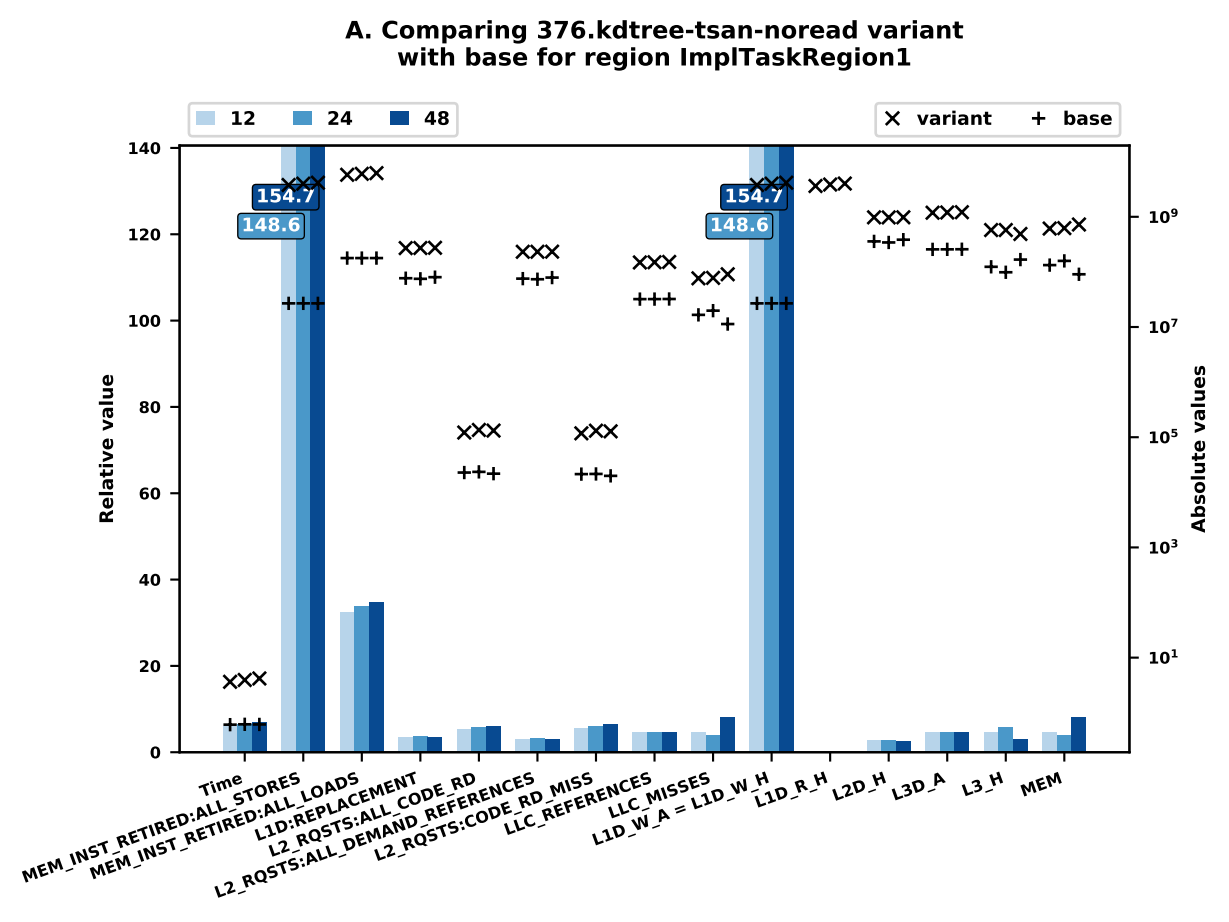
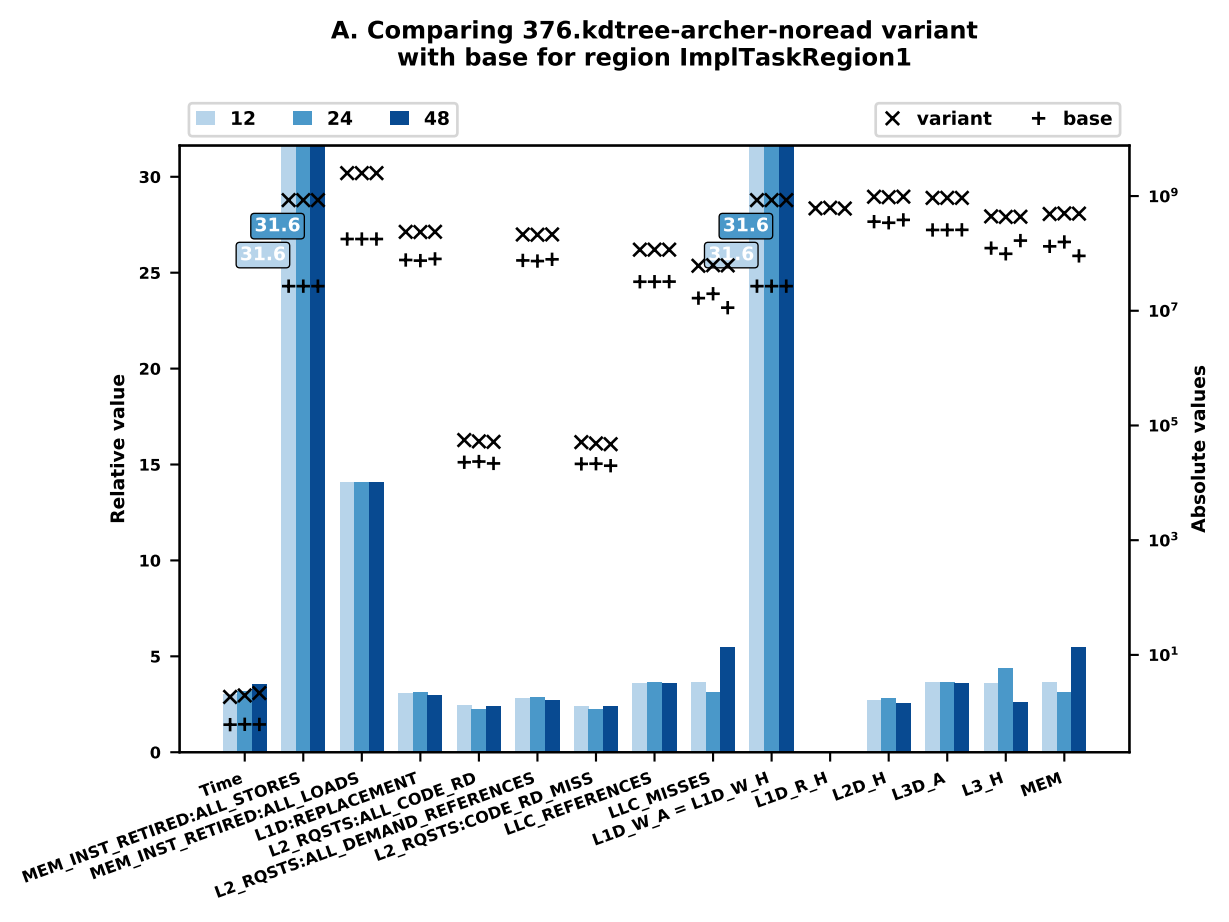
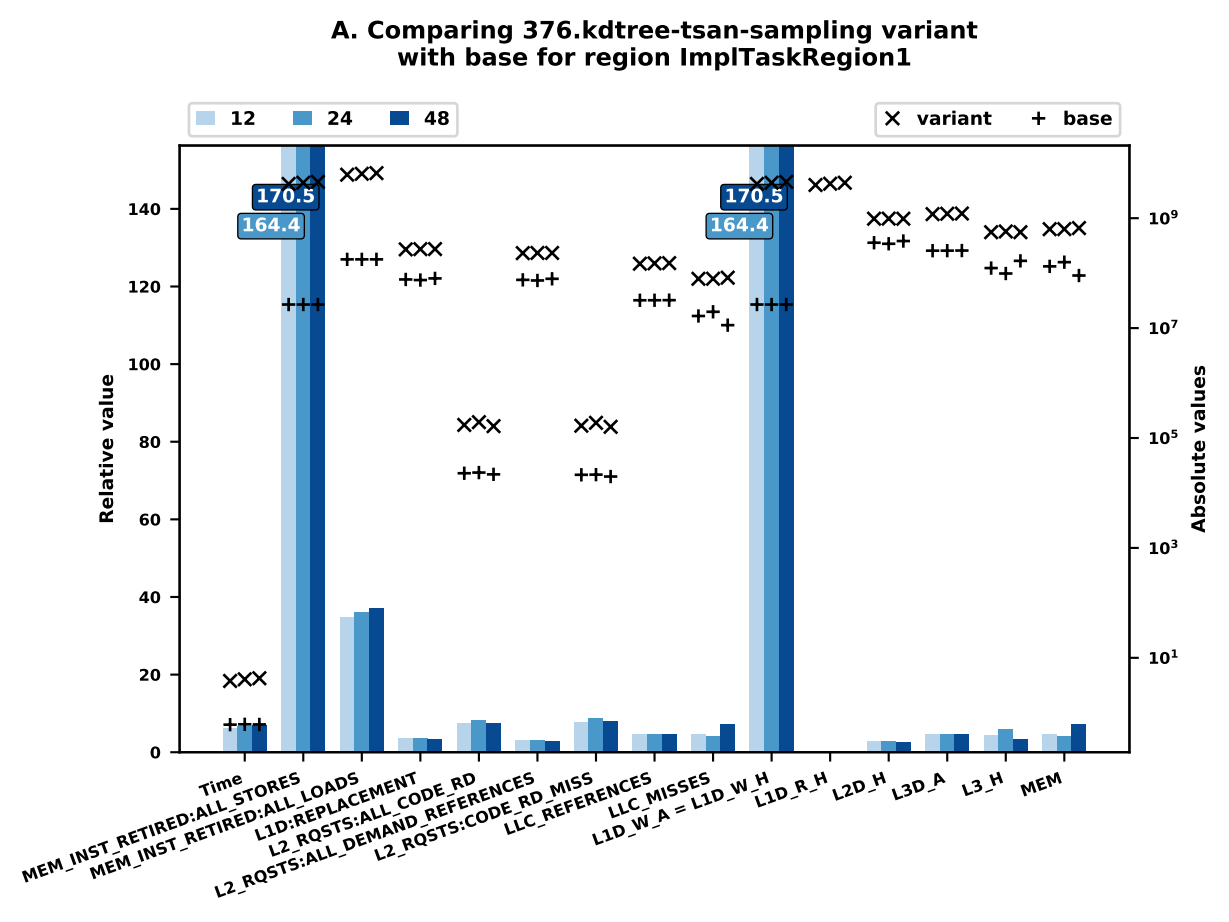
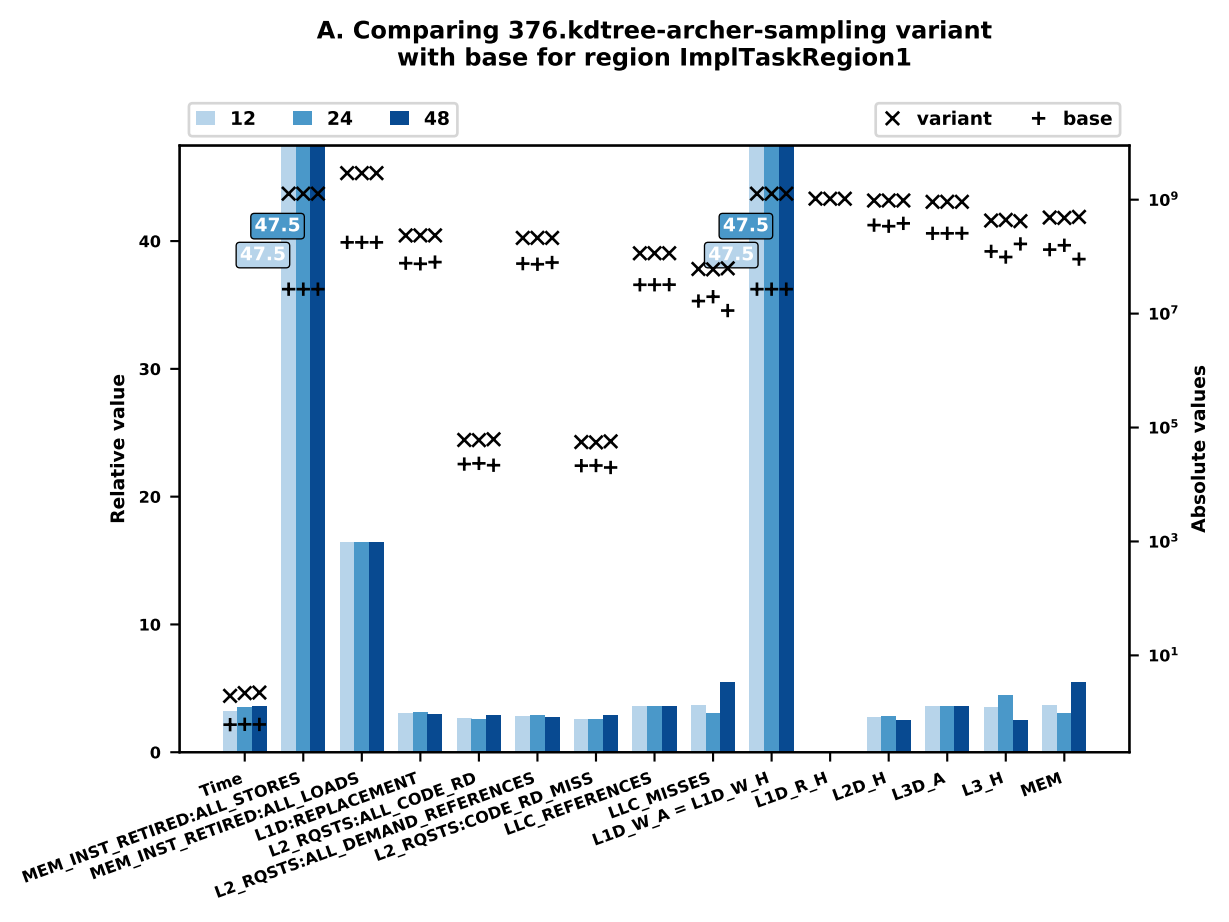
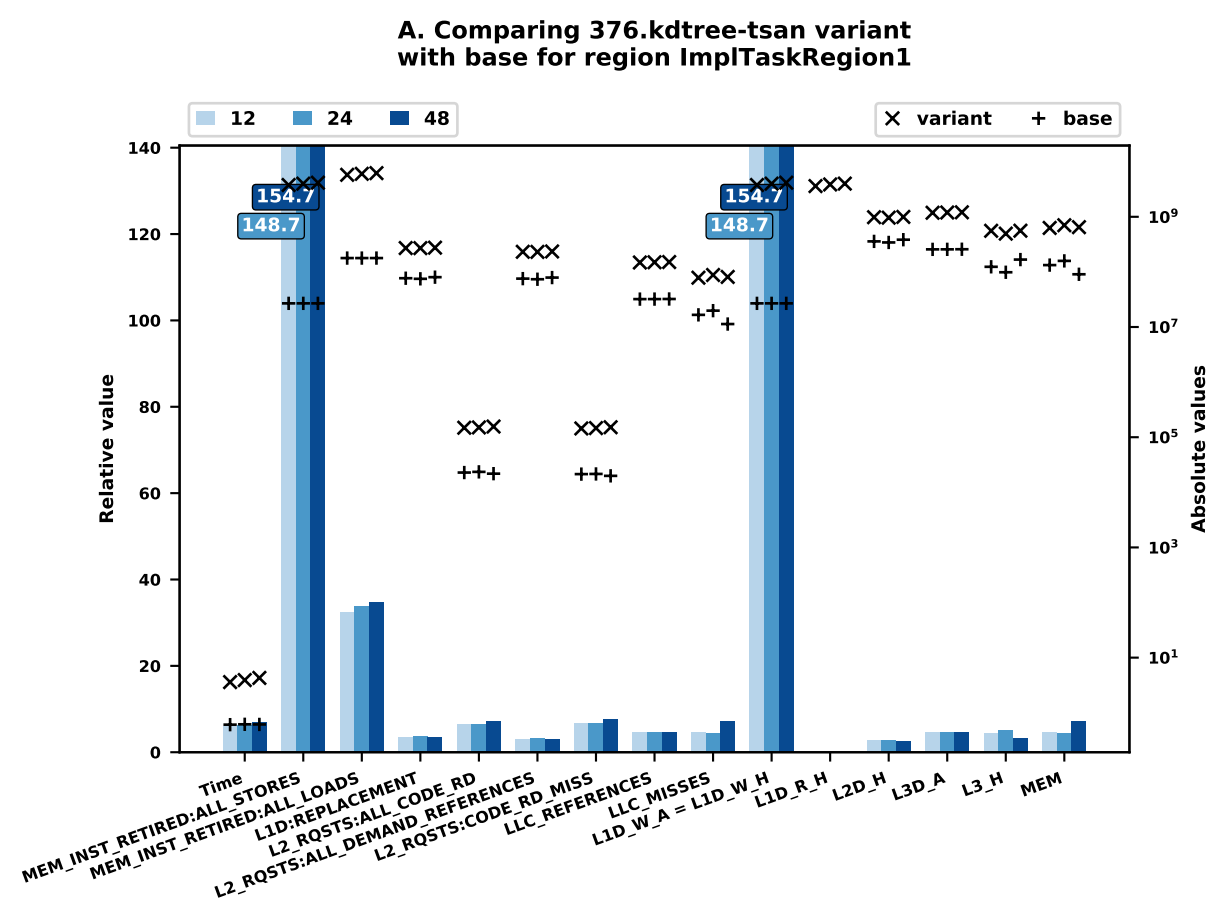

12
24
48
base
Execution time [s]
110.2
108.7
111.0
109.3
tsan-noread
365.3
326.1
371.5
322.4
archer-noread
585.2
538.9
583.7
539.7
tsan-sampling
381.4
351.8
372.3
341.7
archer-sampling
670.5
620.5
669.7
619.6
tsan
338.5
299.4
346.9
279.4
archer
611.8
563.1
608.0
563.8
ImplTaskRegion1
ImplTaskRegion2
ImplTaskRegion3
ImplTaskRegion4
ExplTaskRegion5
ExplTaskRegion6
ImplTaskRegion7
ExplTaskRegion8
ExplTaskRegion9
ExplTaskRegion10
ExplTaskRegion11

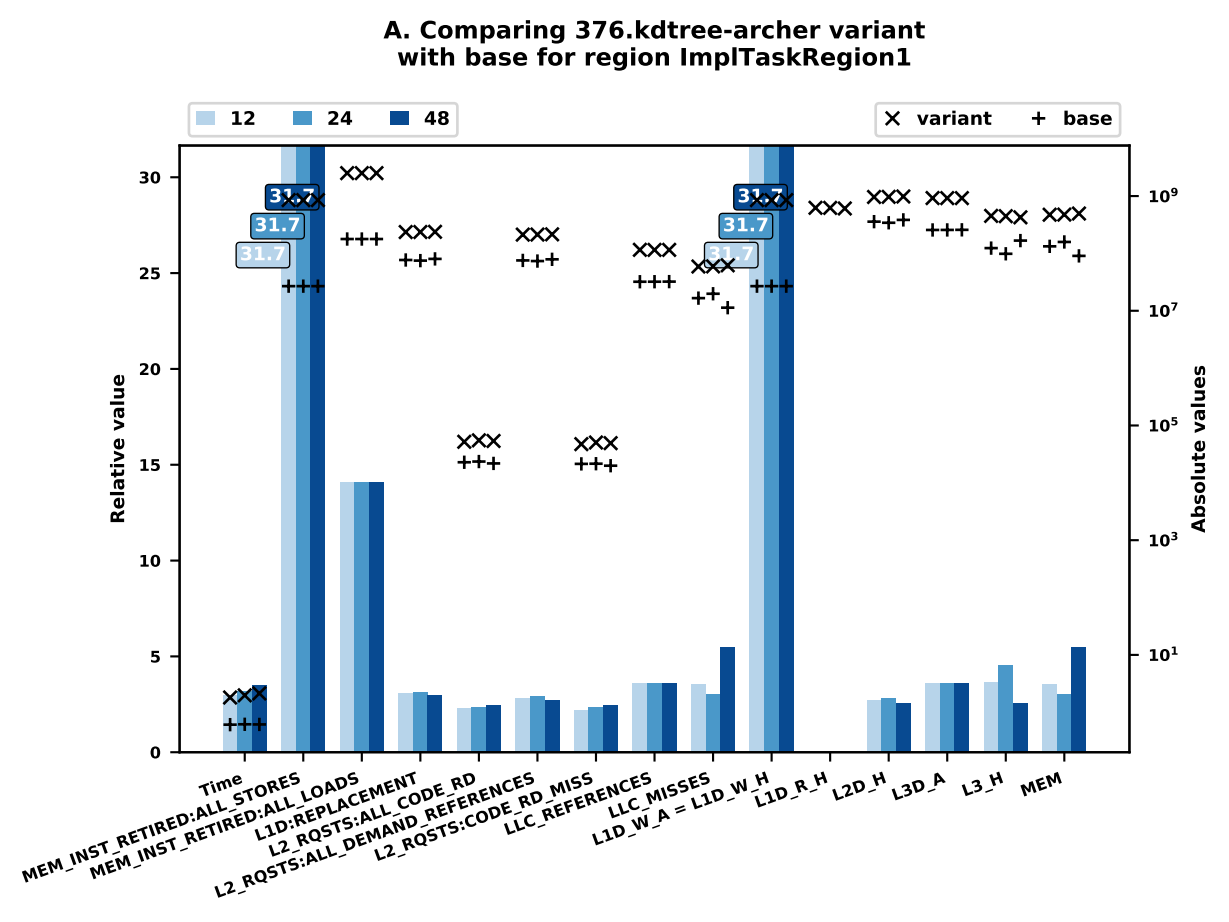

A. Comparing 376.kdtree-tsan-noread variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
154.7
148.6
154.7
148.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

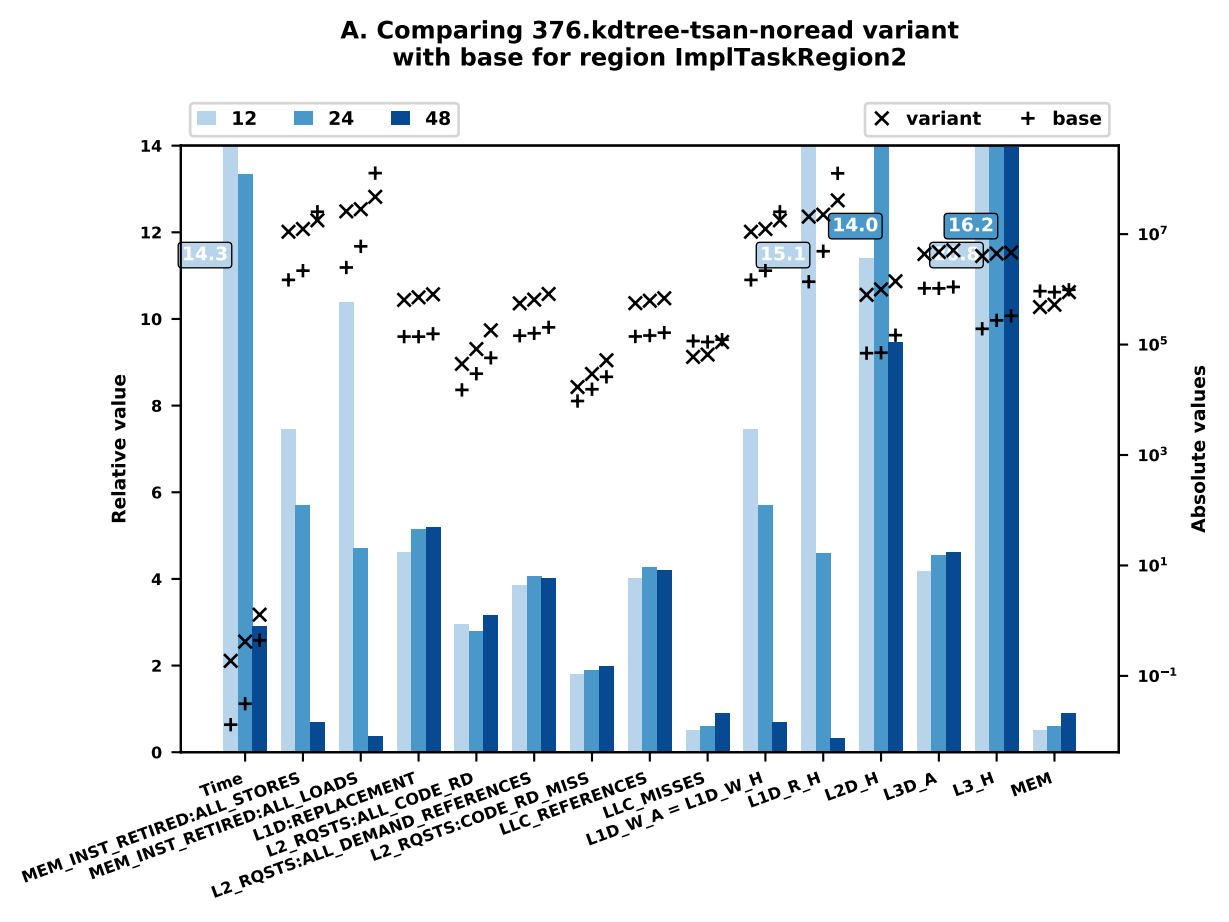

A. Comparing 376.kdtree-archer-noread variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
31.6
31.6
31.6
31.6
0
5
10
15
20
25
30
10^1
10^3
10^5
10^7
10^9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

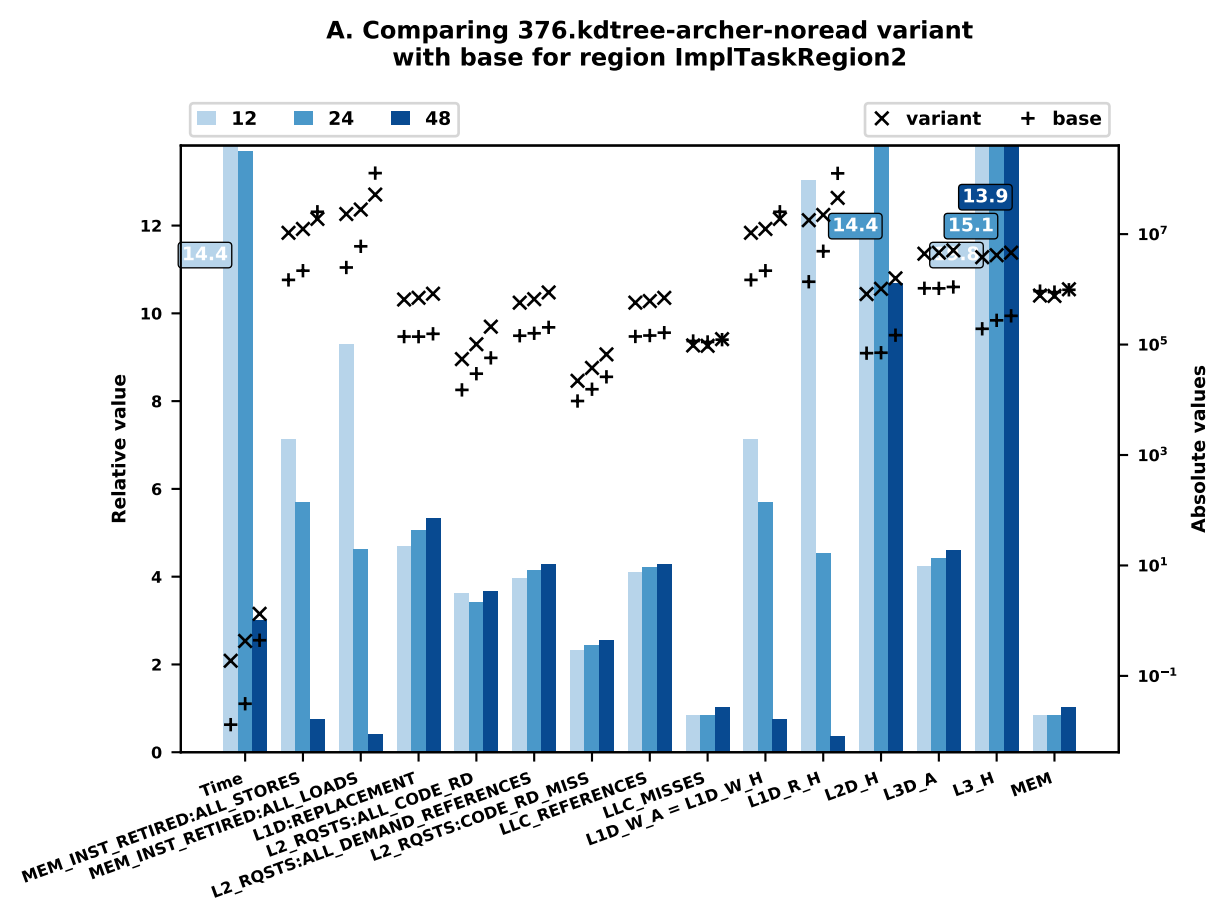

A. Comparing 376.kdtree-tsan-sampling variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
170.5
164.4
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

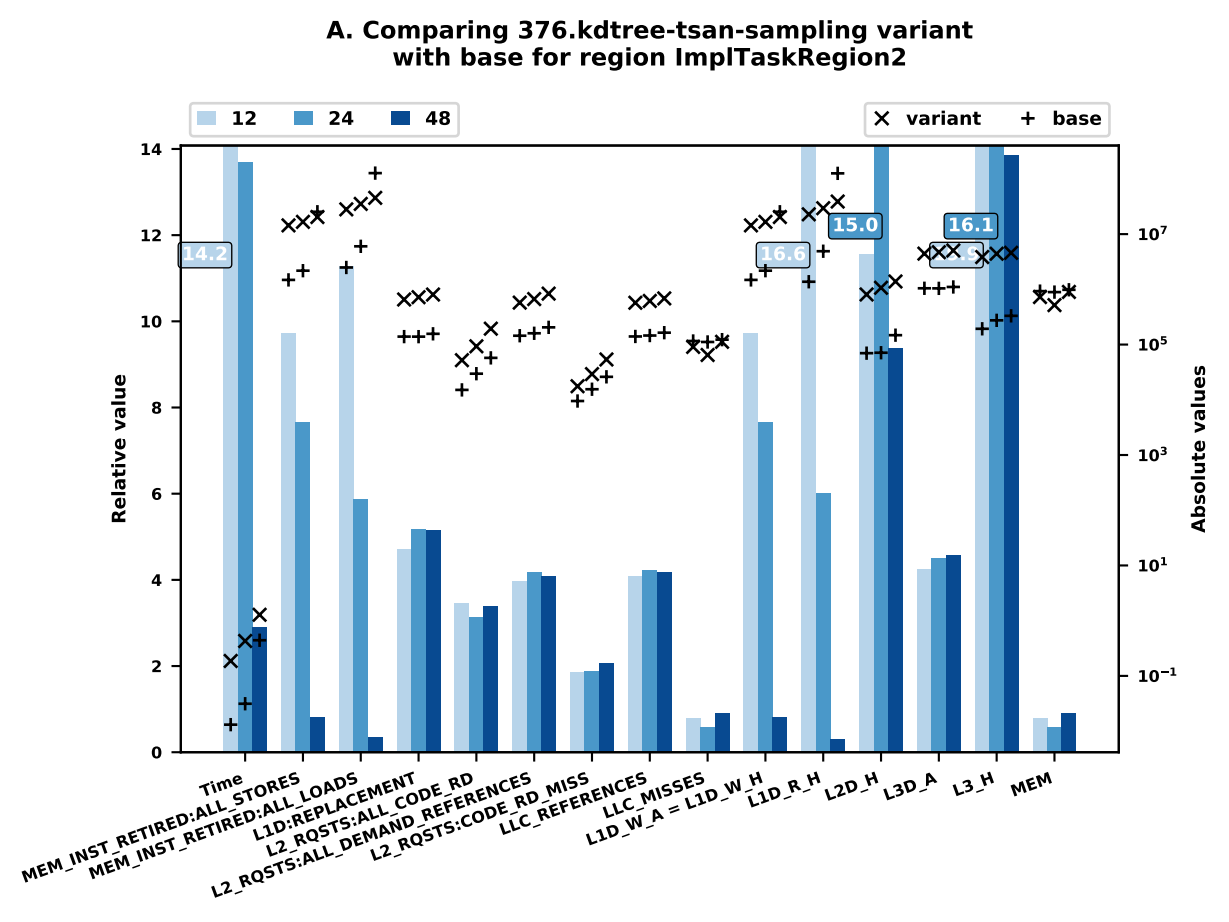

A. Comparing 376.kdtree-archer-sampling variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
0
10
20
30
40
10^1
10^3
10^5
10^7
10^9
47.5
47.5
47.5
47.5
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

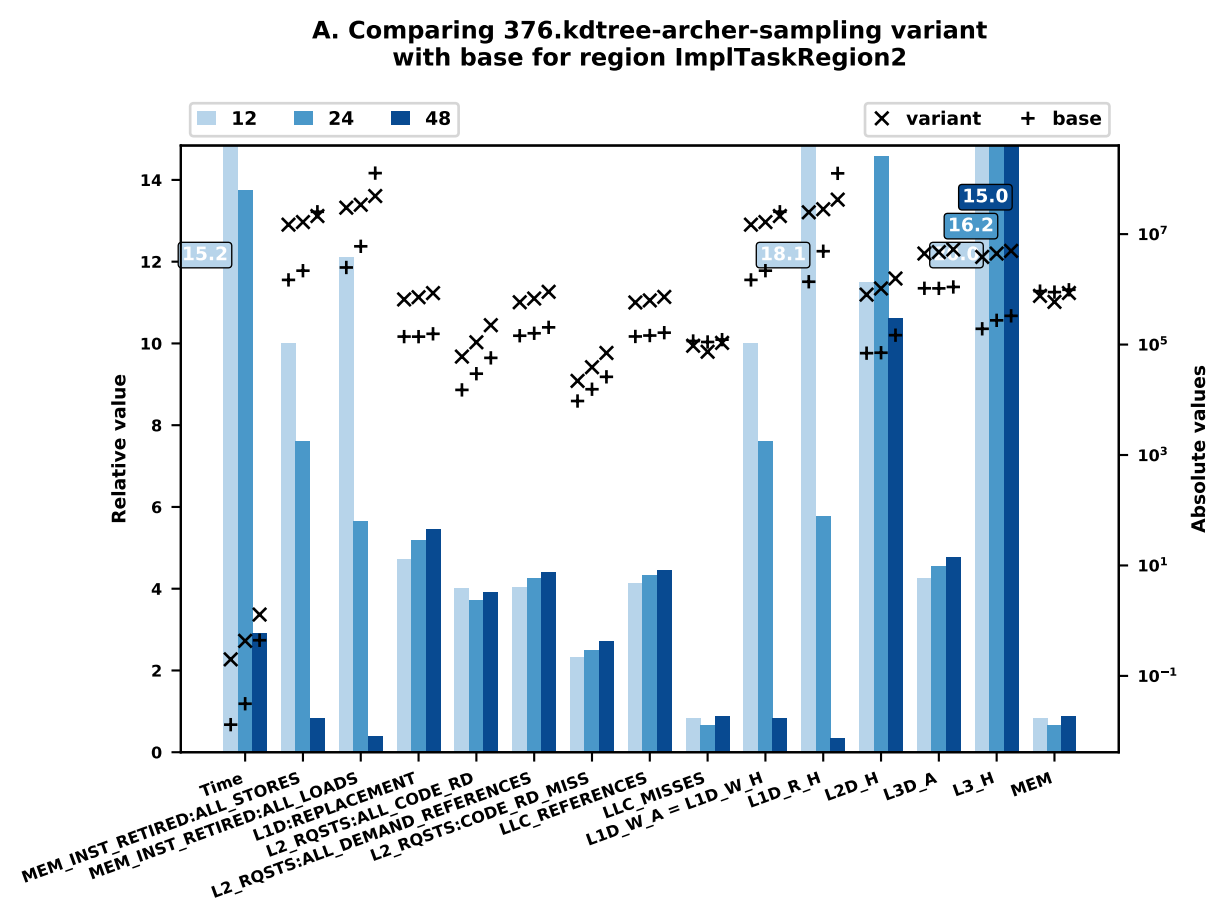

A. Comparing 376.kdtree-tsan variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
154.7
148.7
154.7
148.7
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

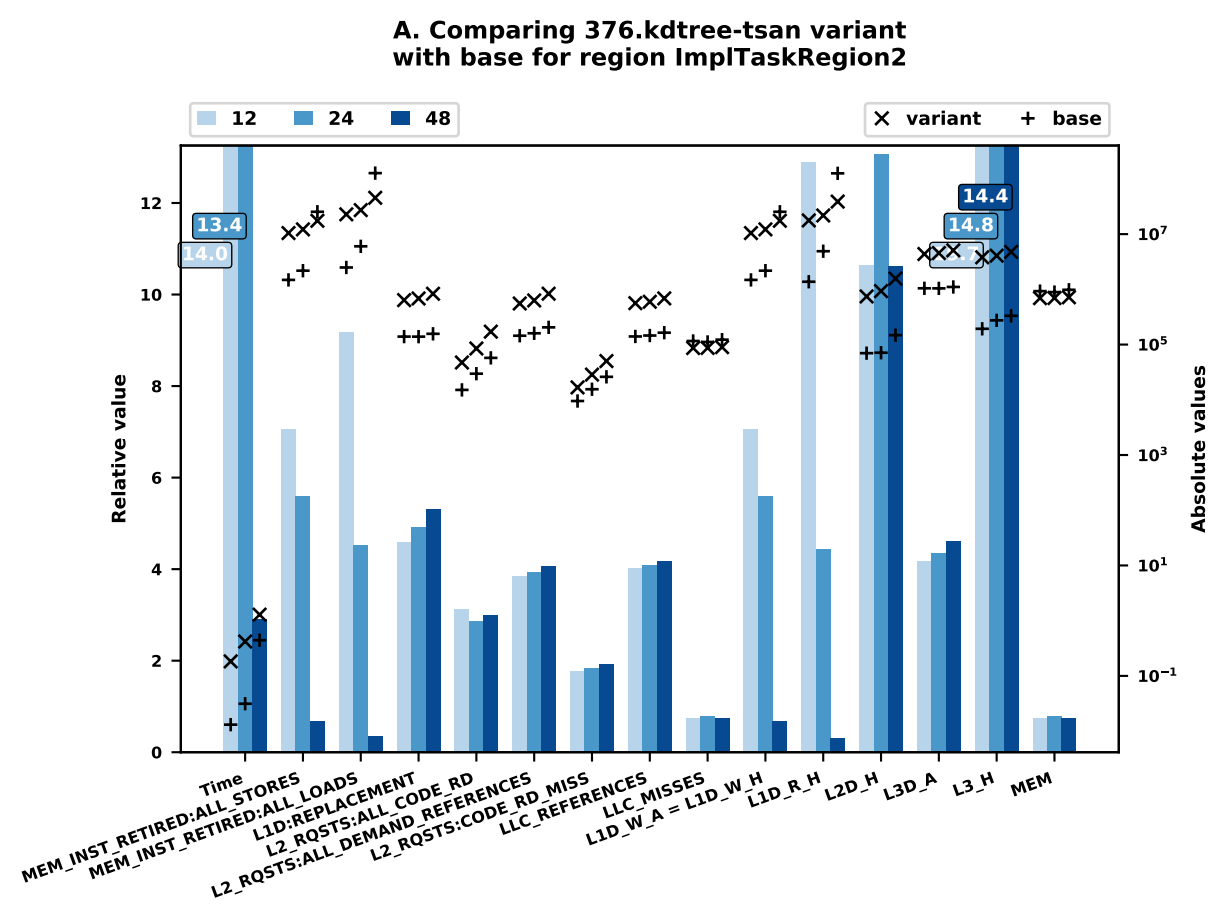

A. Comparing 376.kdtree-archer variant
with base for region ImplTaskRegion1
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
30
10^1
10^3
10^5
10^7
10^9
31.7
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

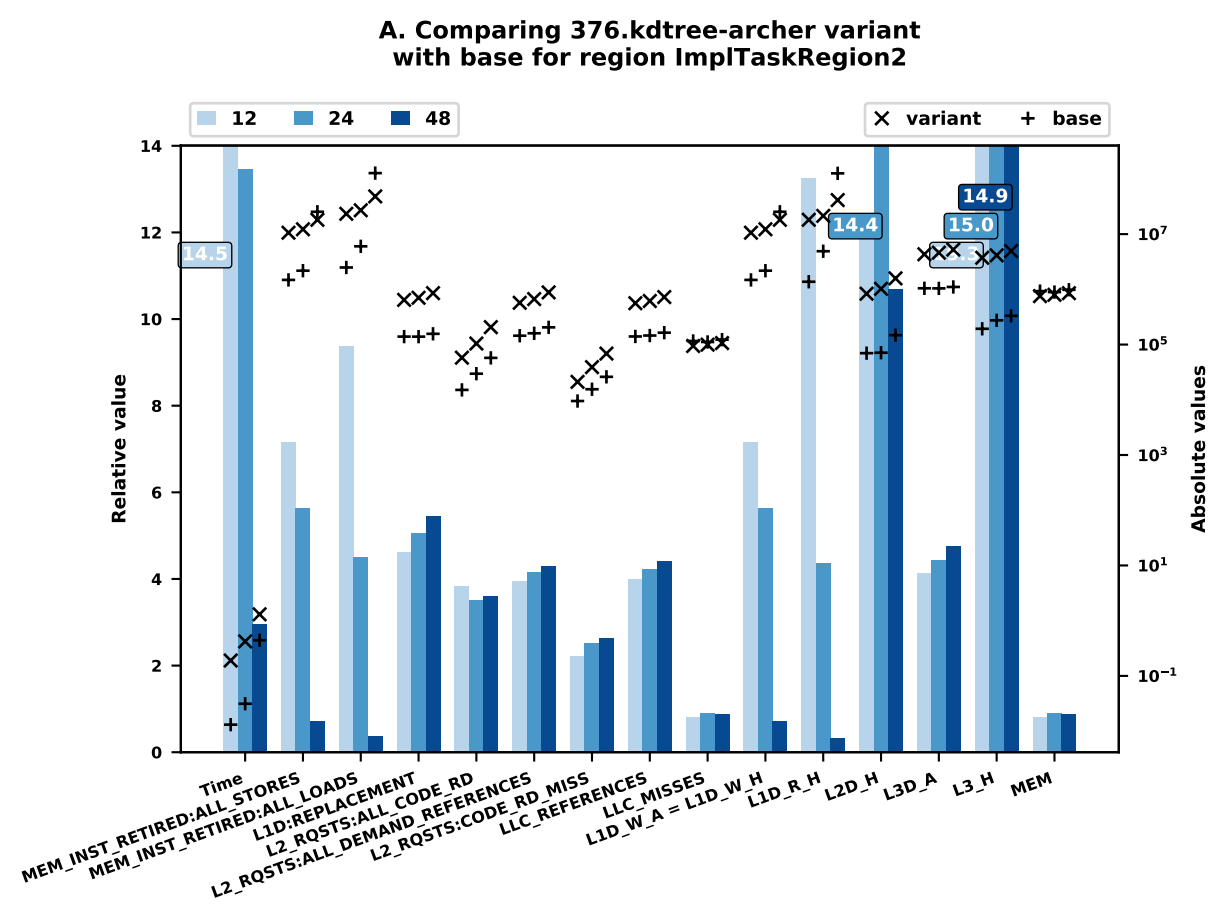

A. Comparing 376.kdtree-tsan-noread variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
14.3
14.0
16.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

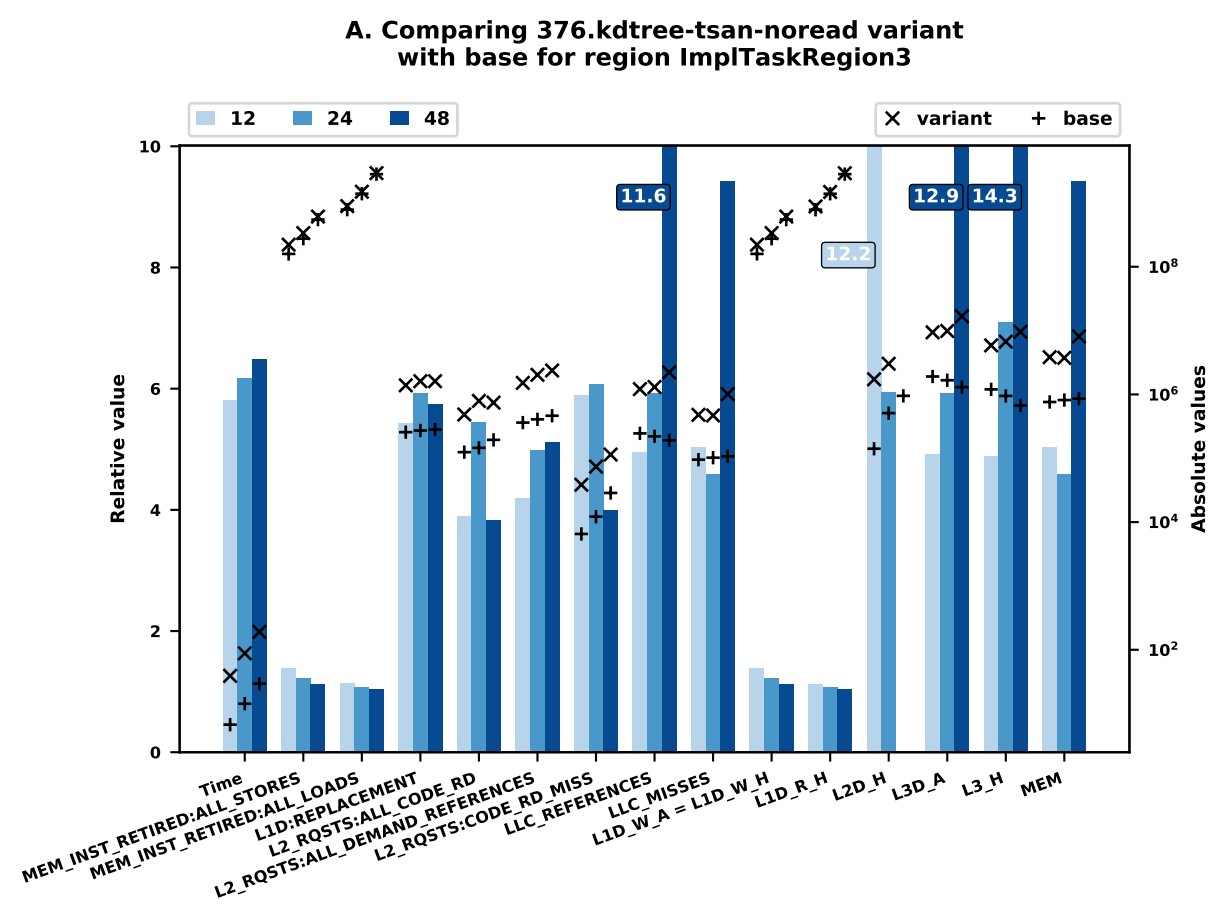

A. Comparing 376.kdtree-archer-noread variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
14.4
14.4
15.1
13.9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

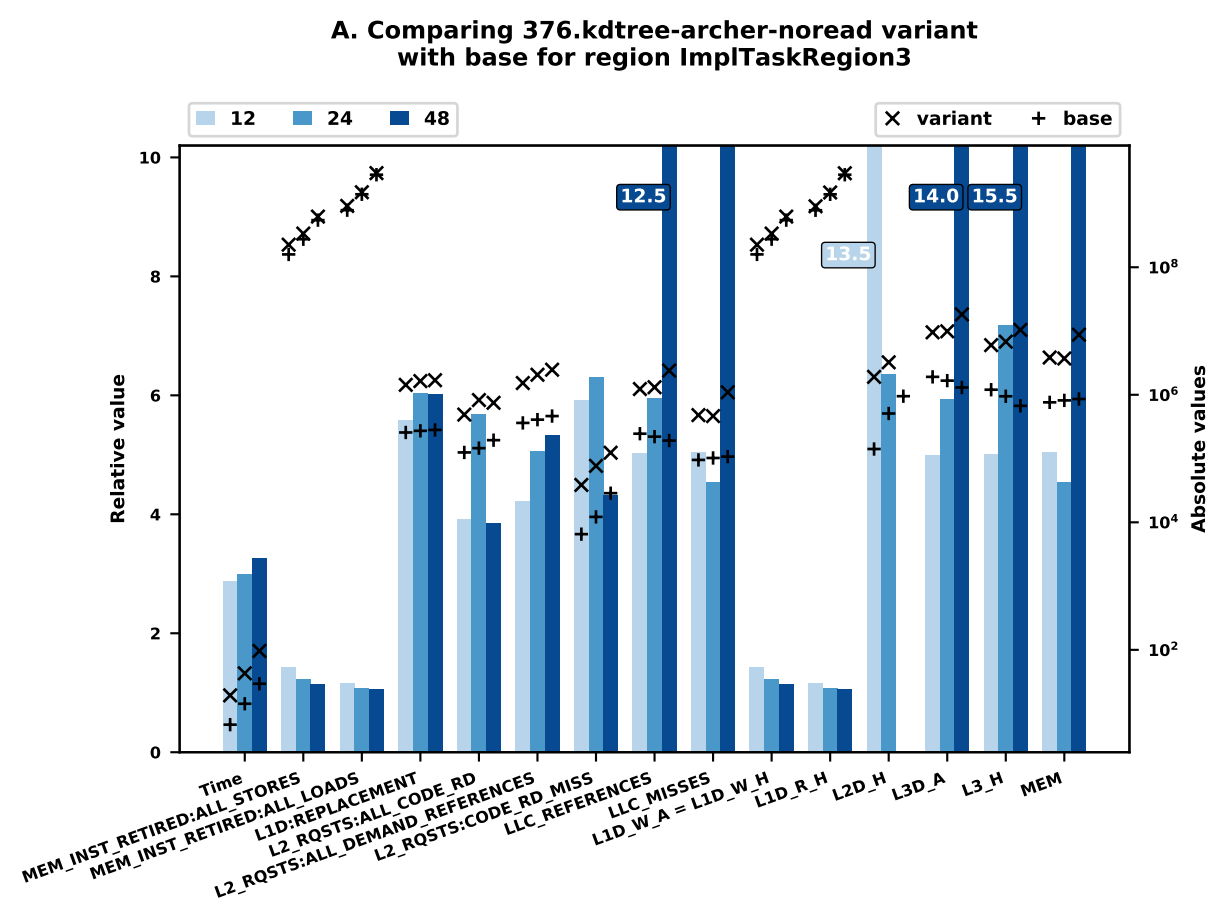

A. Comparing 376.kdtree-tsan-sampling variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
14.2
16.6
15.0
16.1
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

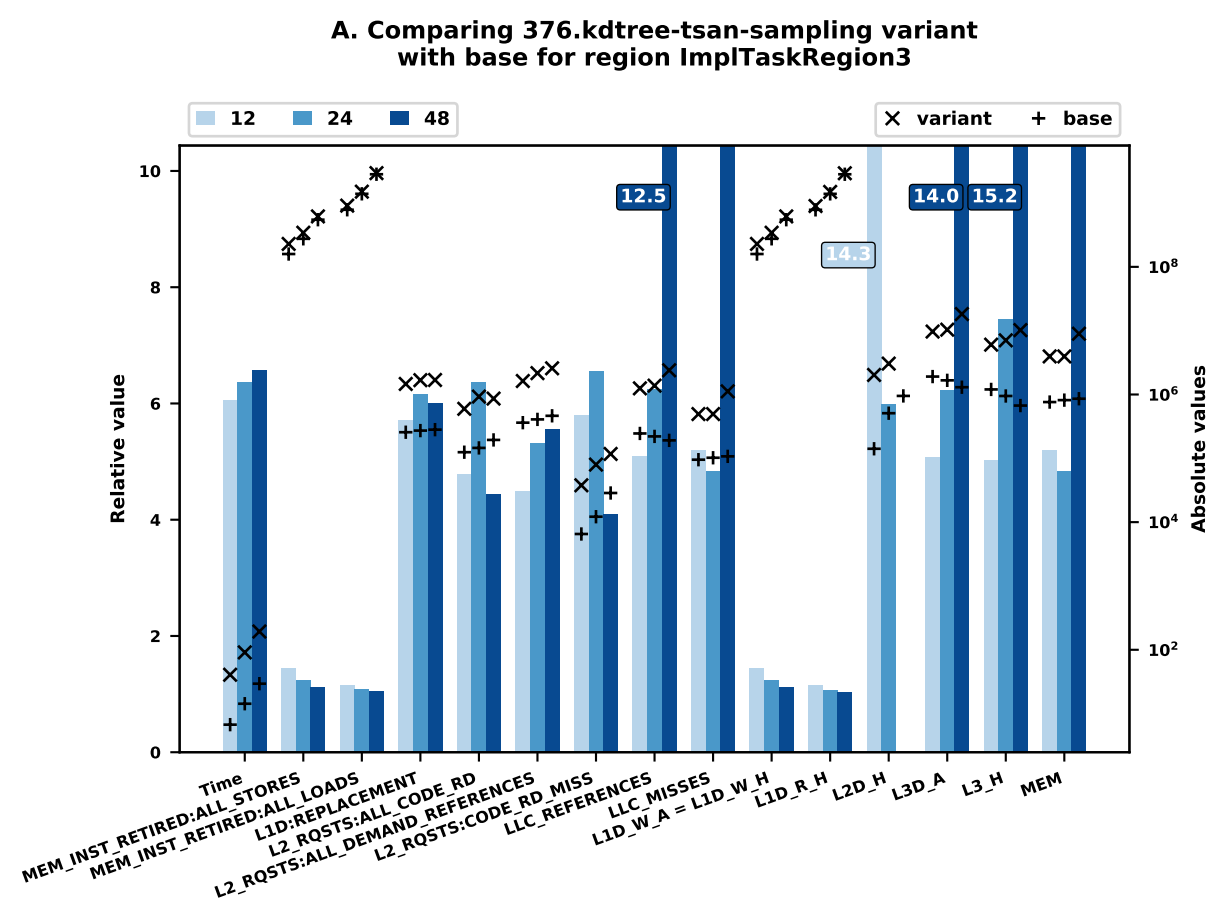

A. Comparing 376.kdtree-archer-sampling variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
15.2
18.2
15.0
16.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

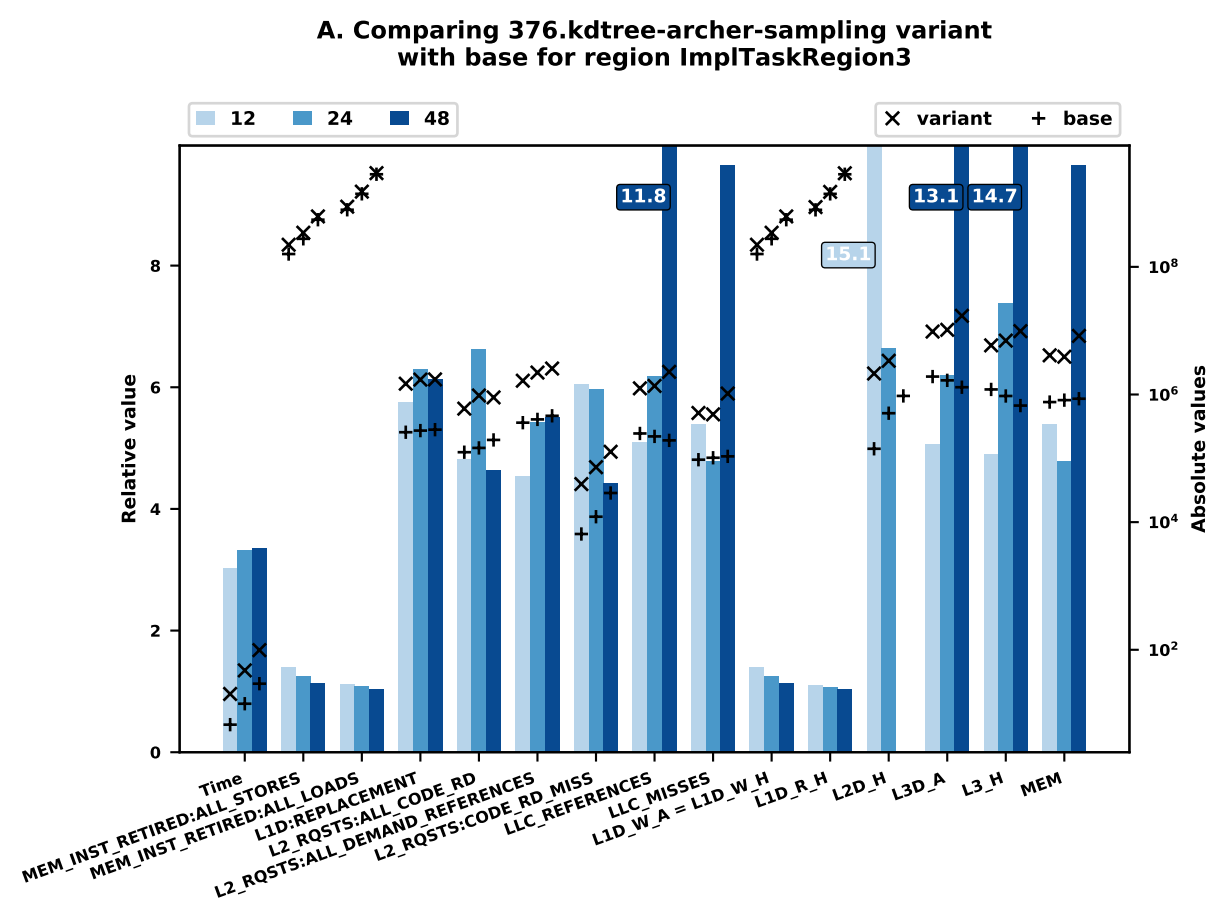

A. Comparing 376.kdtree-tsan variant
with base for region ImplTaskRegion2
12
24
48
variant
base
13.4
14.0
14.4
14.8
Relative value
Absolute values
0
2
4
6
8
10
12
10^{-1}
10^{1}
10^{3}
10^{5}
10^{7}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

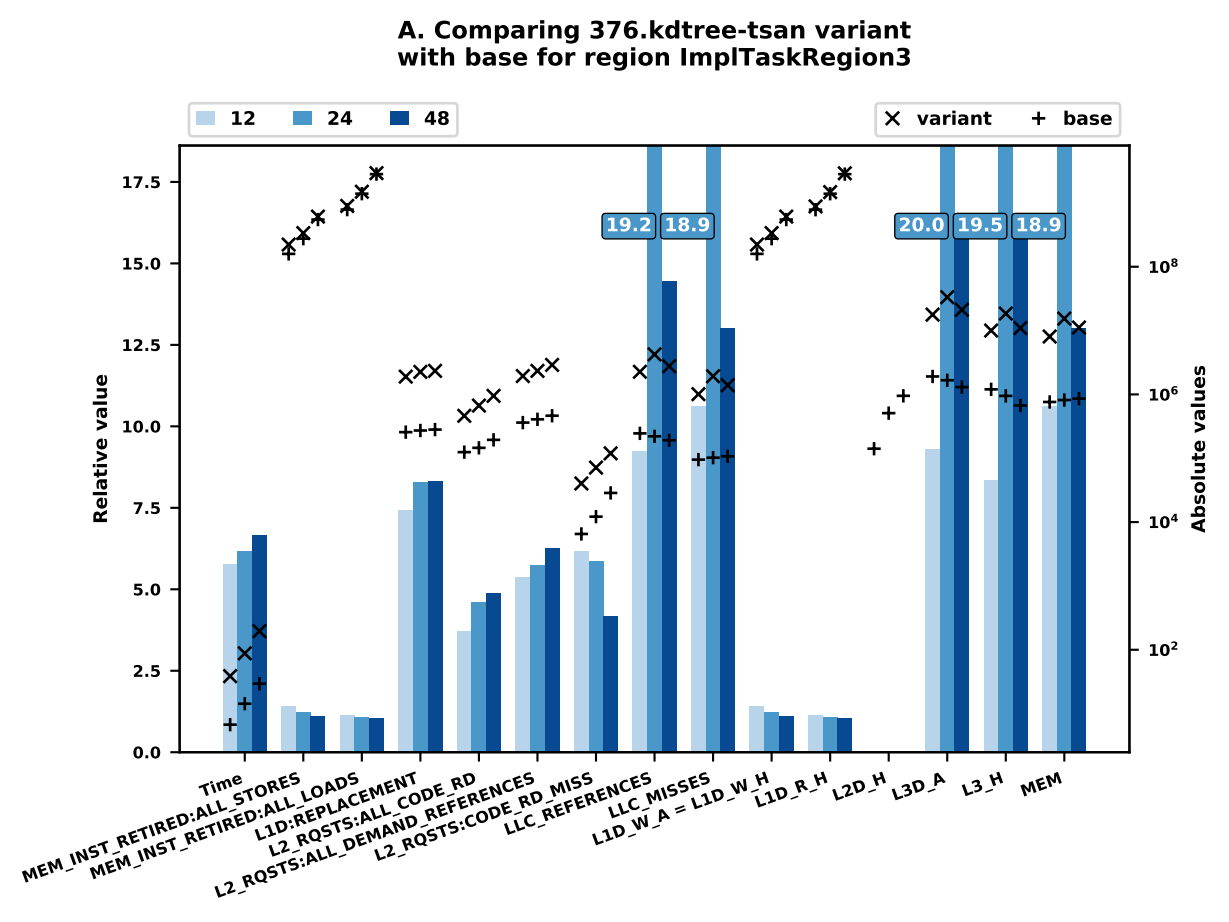

A. Comparing 376.kdtree-archer variant
with base for region ImplTaskRegion2
12
24
48
variant
base
Relative value
Absolute values
14.5
14.4
14.9
15.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

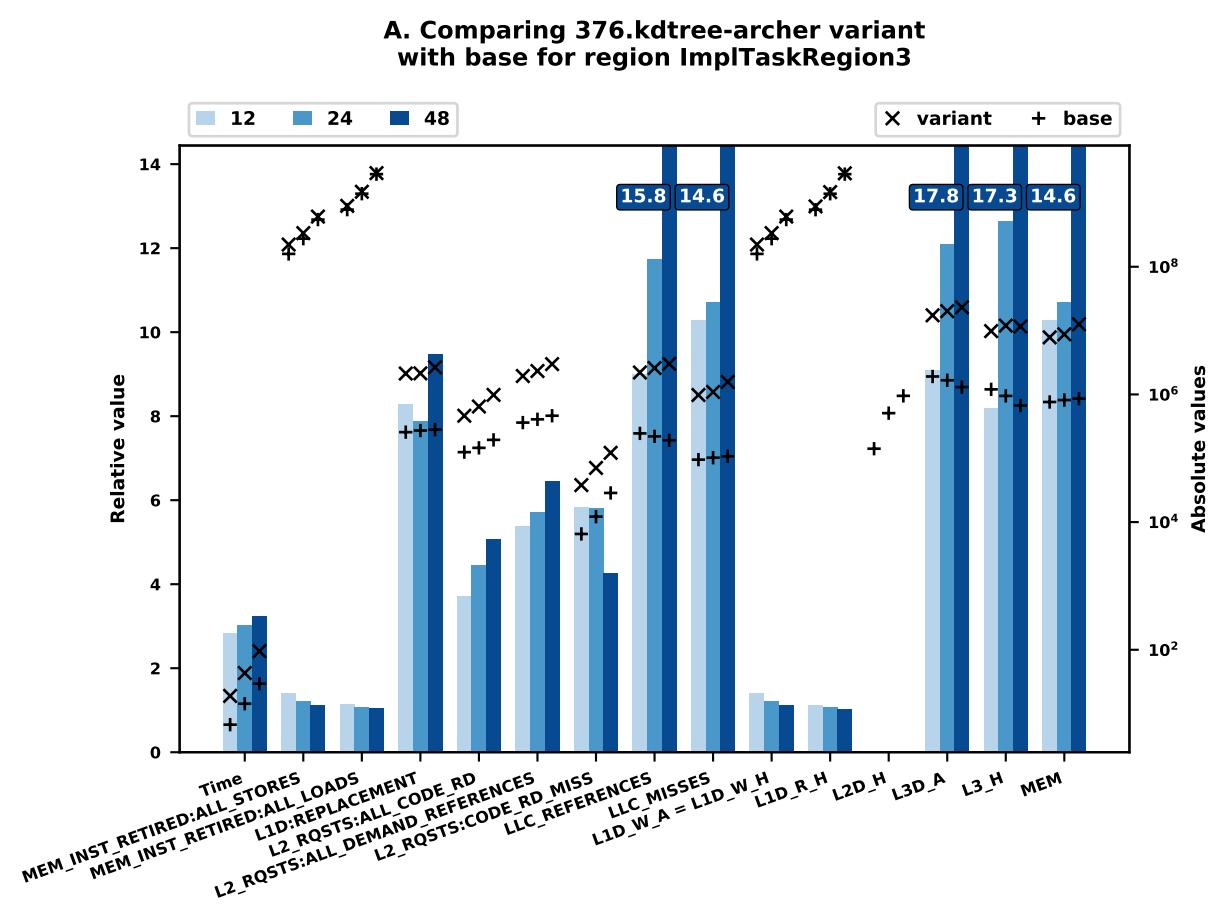

A. Comparing 376.kdtree-tsan-noread variant
with base for region ImplTaskRegion3
12
24
48
variant
base
Relative value
Absolute values
0
2
4
6
8
10
10^2
10^4
10^6
10^8
11.6
12.2
12.9
14.3
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

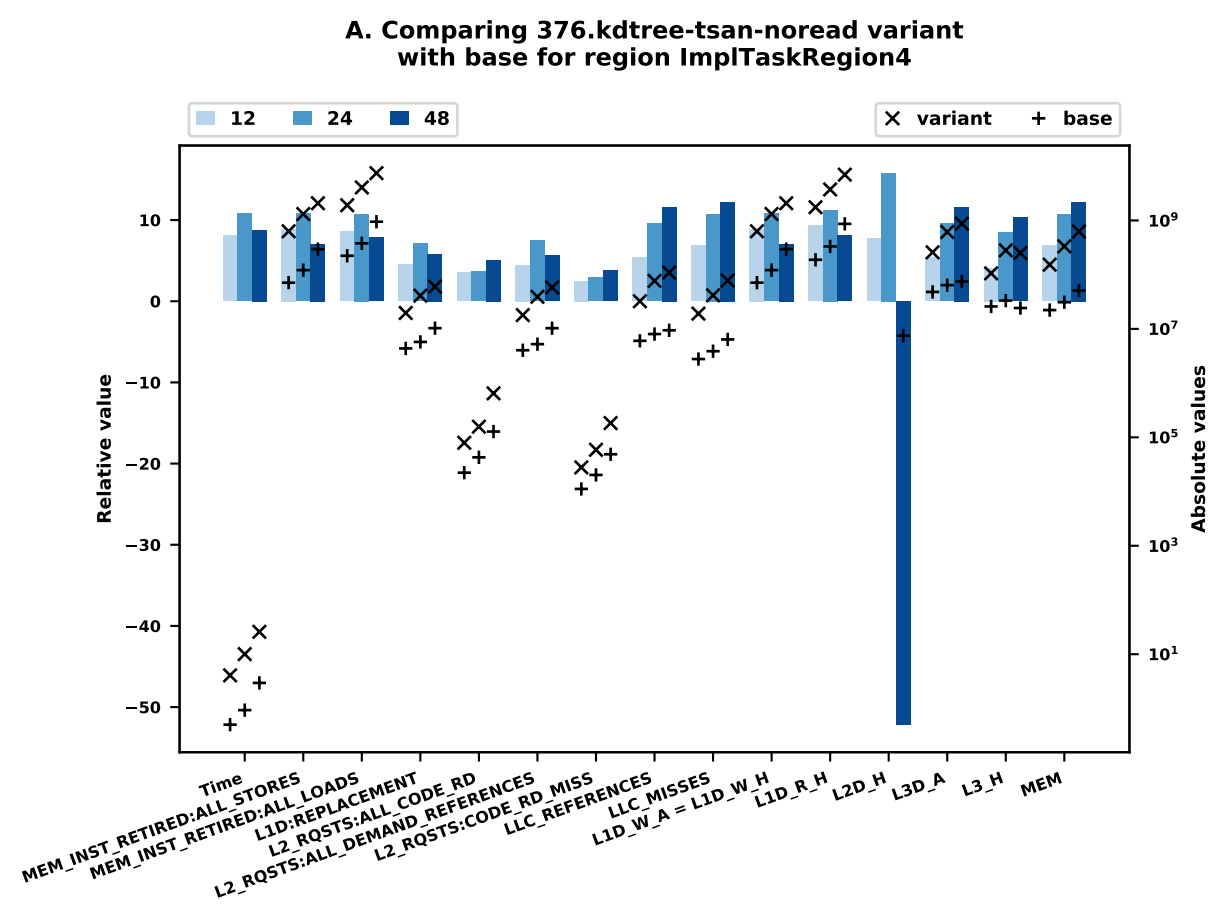

A. Comparing 376.kdtree-archer-noread variant
with base for region ImplTaskRegion3
12
24
48
variant
base
12.5
13.5
14.0
15.5
Relative value
Absolute values
0
2
4
6
8
10
10^2
10^4
10^6
10^8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

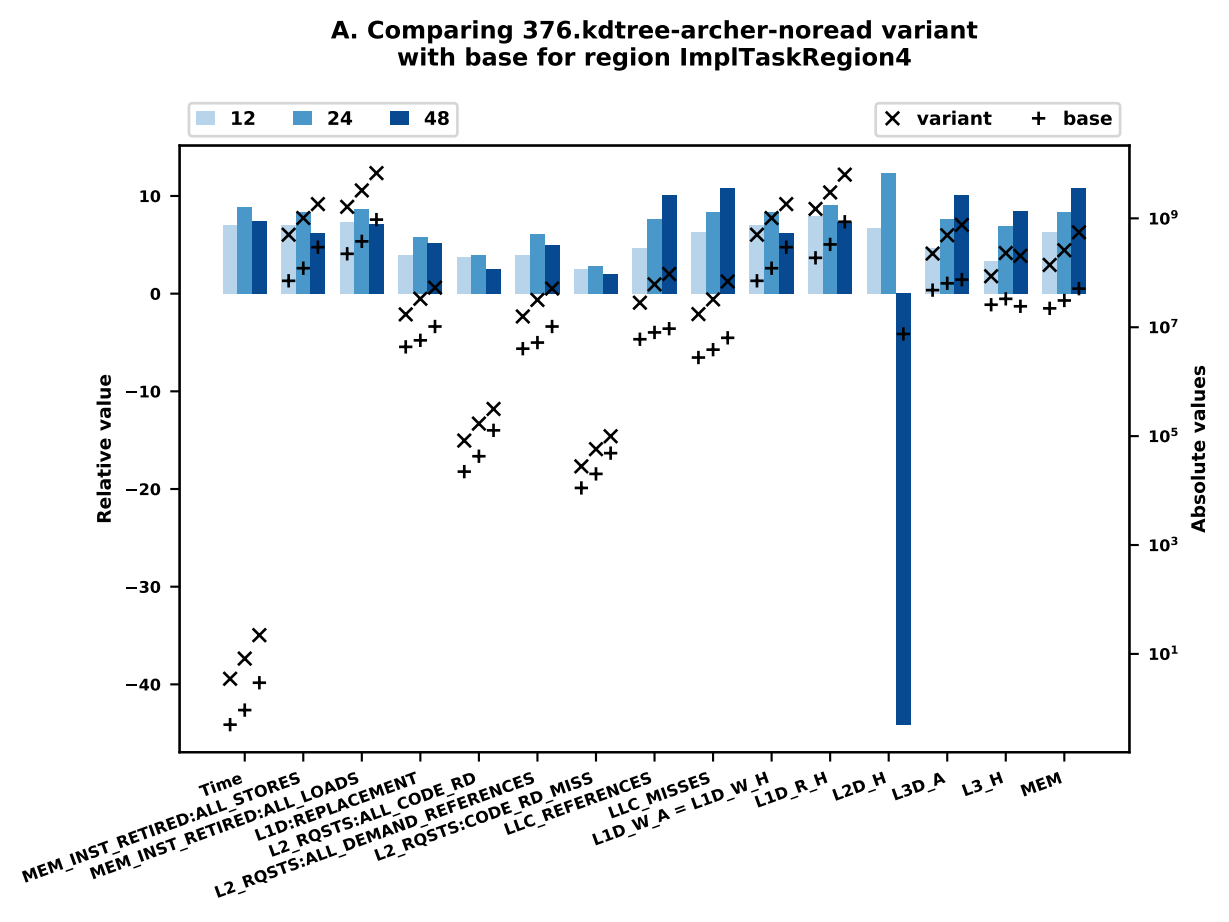

A. Comparing 376.kdtree-tsan-sampling variant
with base for region ImplTaskRegion3
12
24
48
variant
base
12.5
14.3
14.0
15.2
Relative value
Absolute values
0
2
4
6
8
10
10^2
10^4
10^6
10^8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

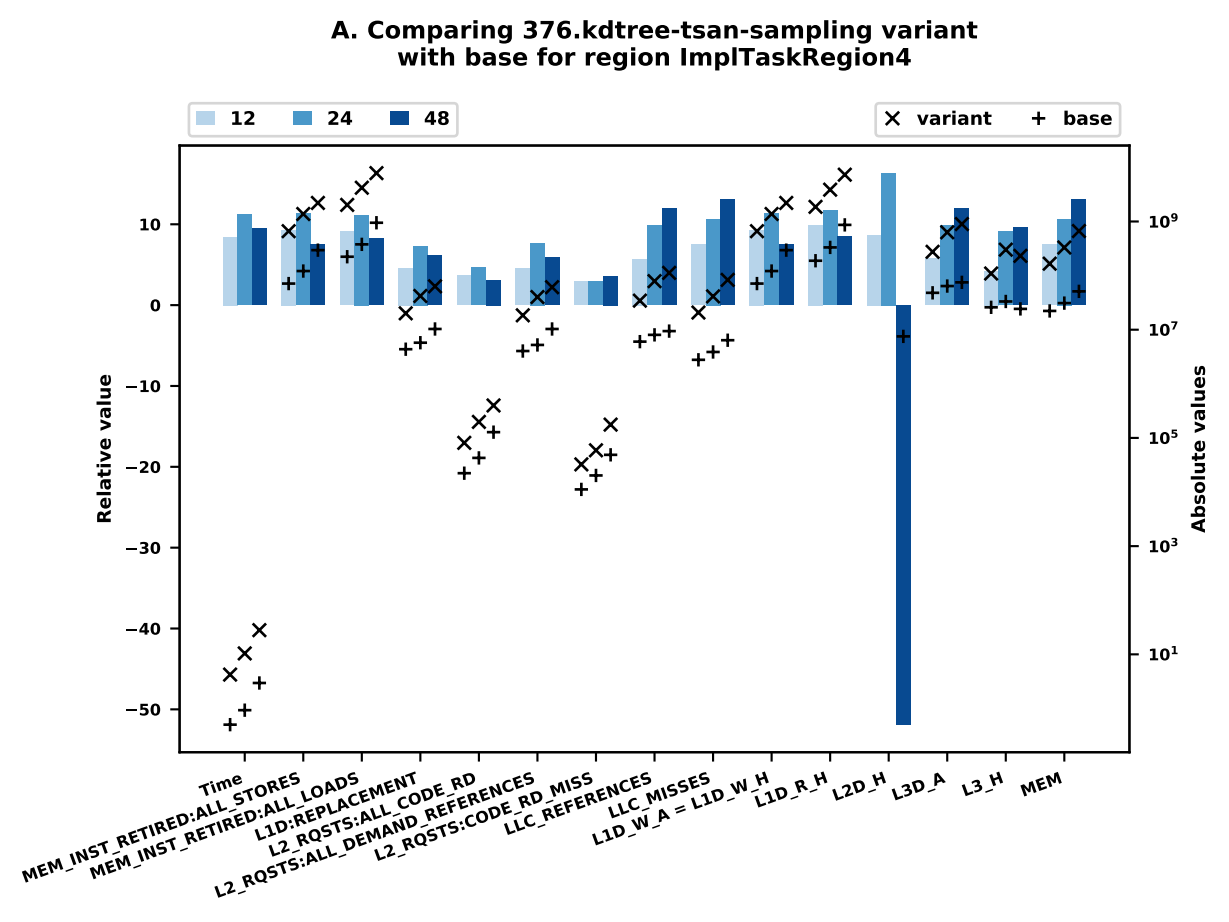

A. Comparing 376.kdtree-archer-sampling variant
with base for region ImplTaskRegion3
12
24
48
variant
base
11.8
15.1
13.1
14.7
Relative value
Absolute values
0
2
4
6
8
10^2
10^4
10^6
10^8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

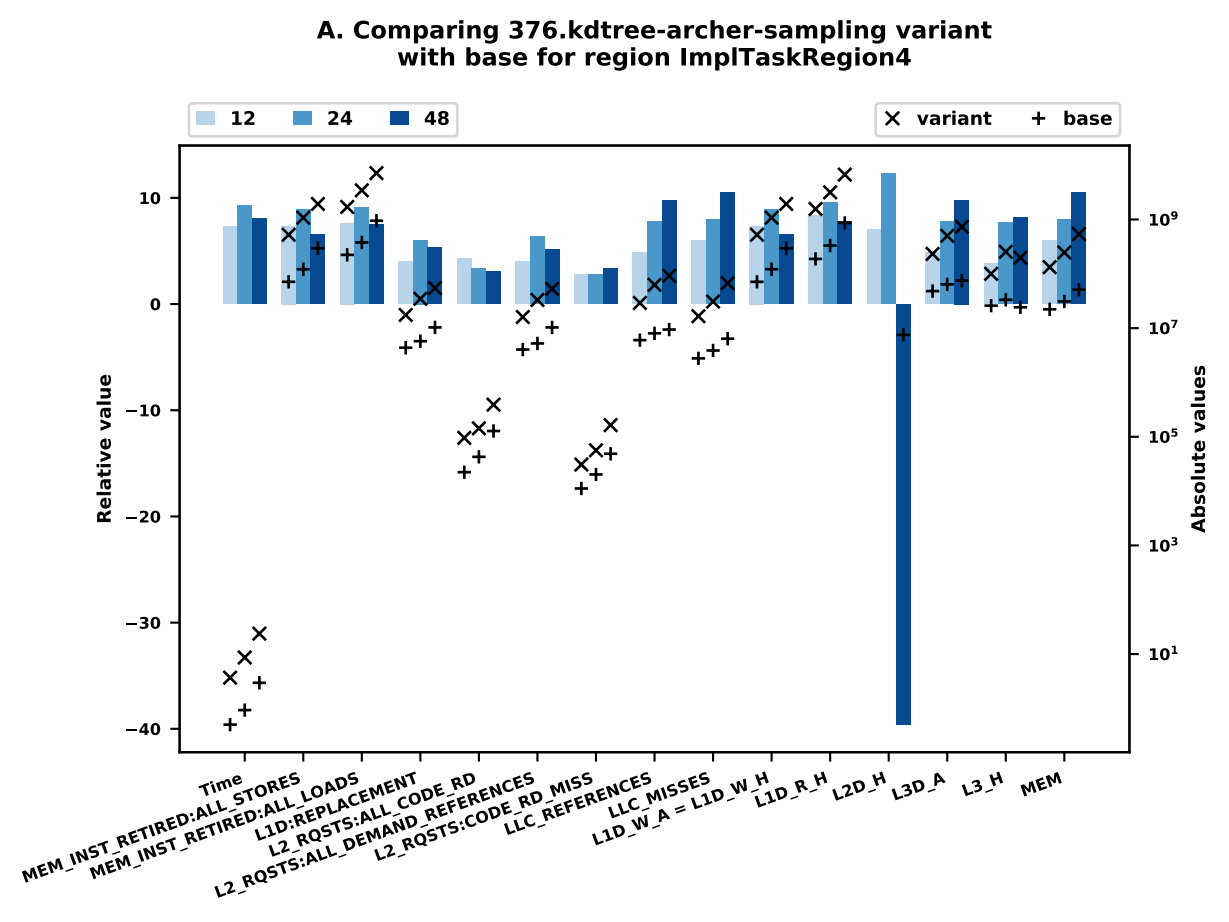

A. Comparing 376.kdtree-tsan variant
with base for region ImplTaskRegion3
12
24
48
variant
base
Relative value
Absolute values
19.2
18.9
20.0
19.5
18.9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

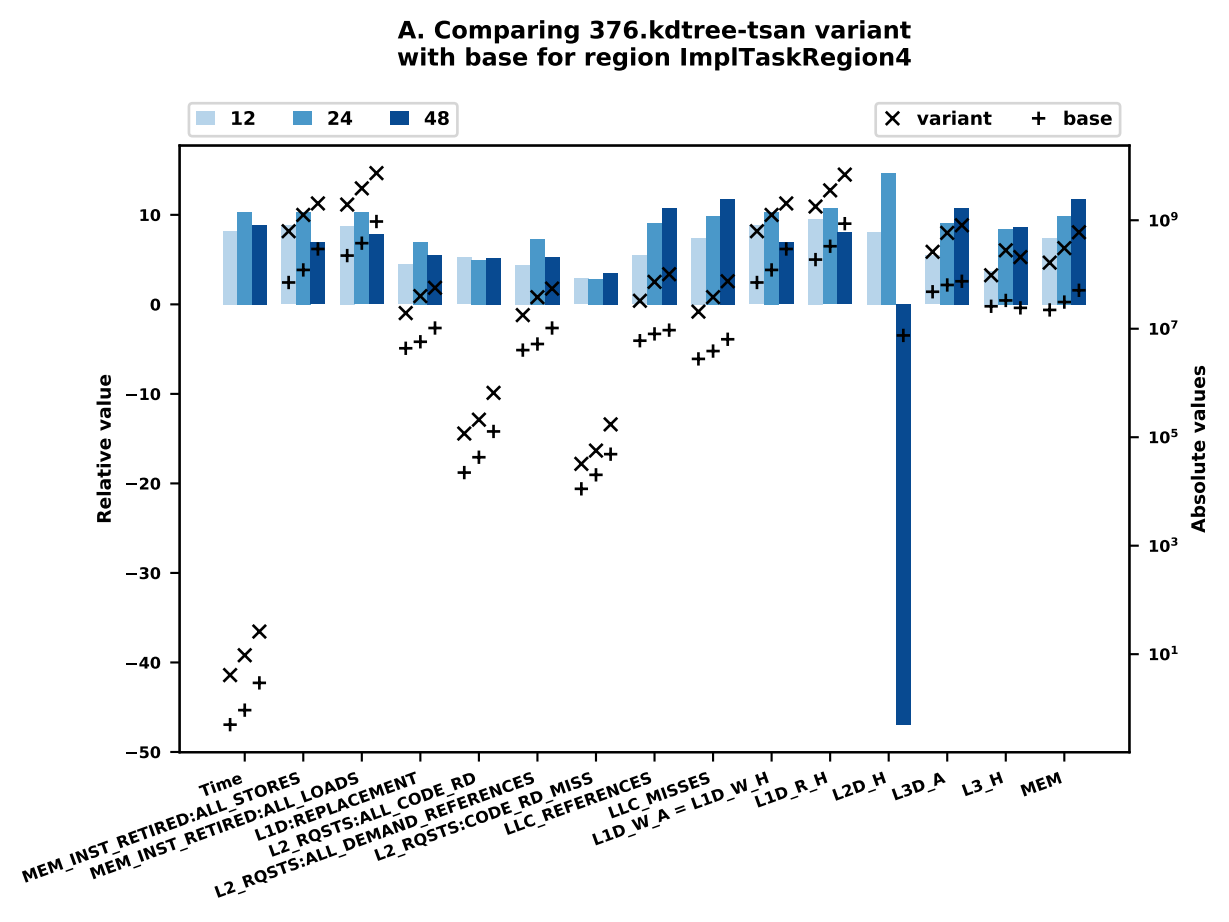

A. Comparing 376.kdtree-archer variant
with base for region ImplTaskRegion3
12
24
48
variant
base
Relative value
Absolute values
15.8
14.6
17.8
17.3
14.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

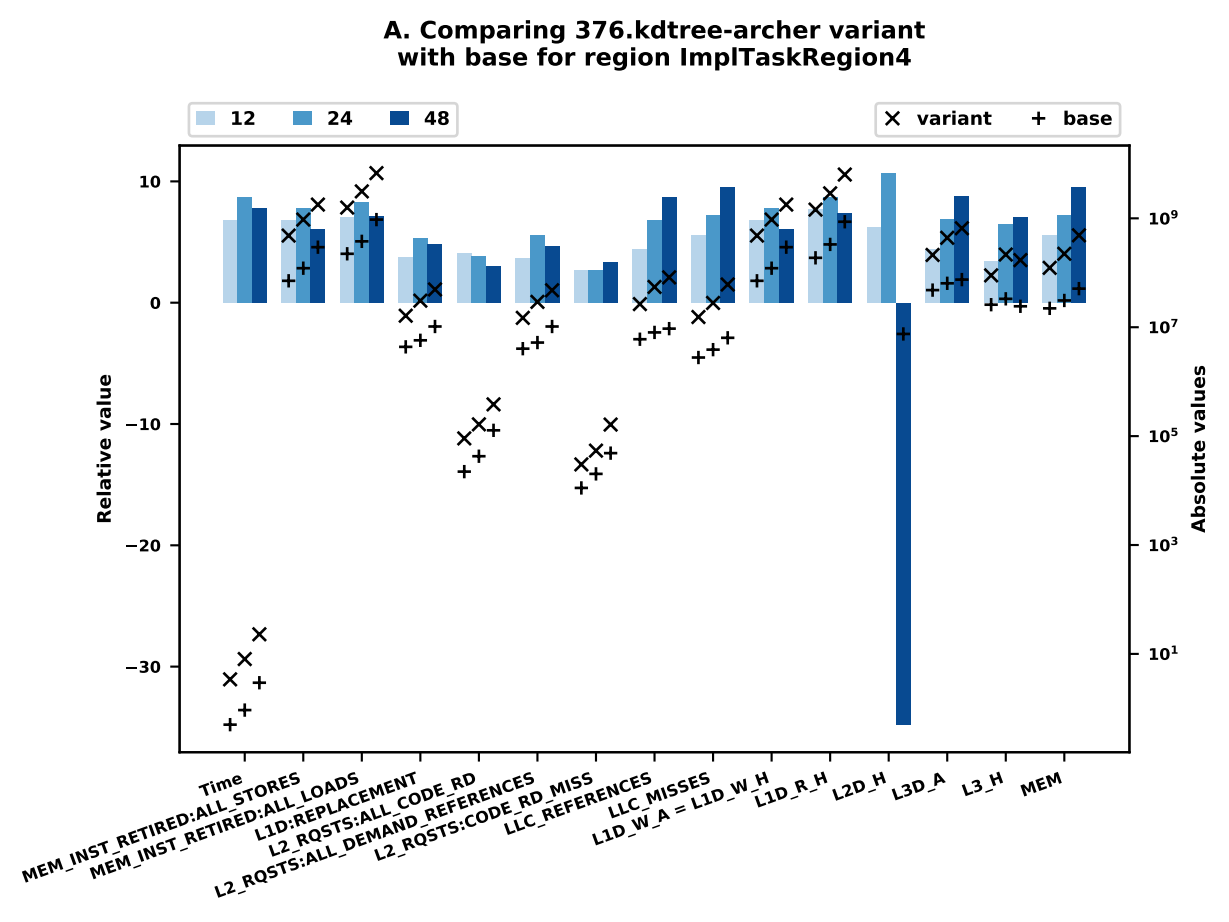

A. Comparing 376.kdtree-tsan-noread variant
with base for region ImplTaskRegion4
12
24
48
variant
base
Relative value
Absolute values
10
0
−10
−20
−30
−40
−50
10^9
10^7
10^5
10^3
10^1
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

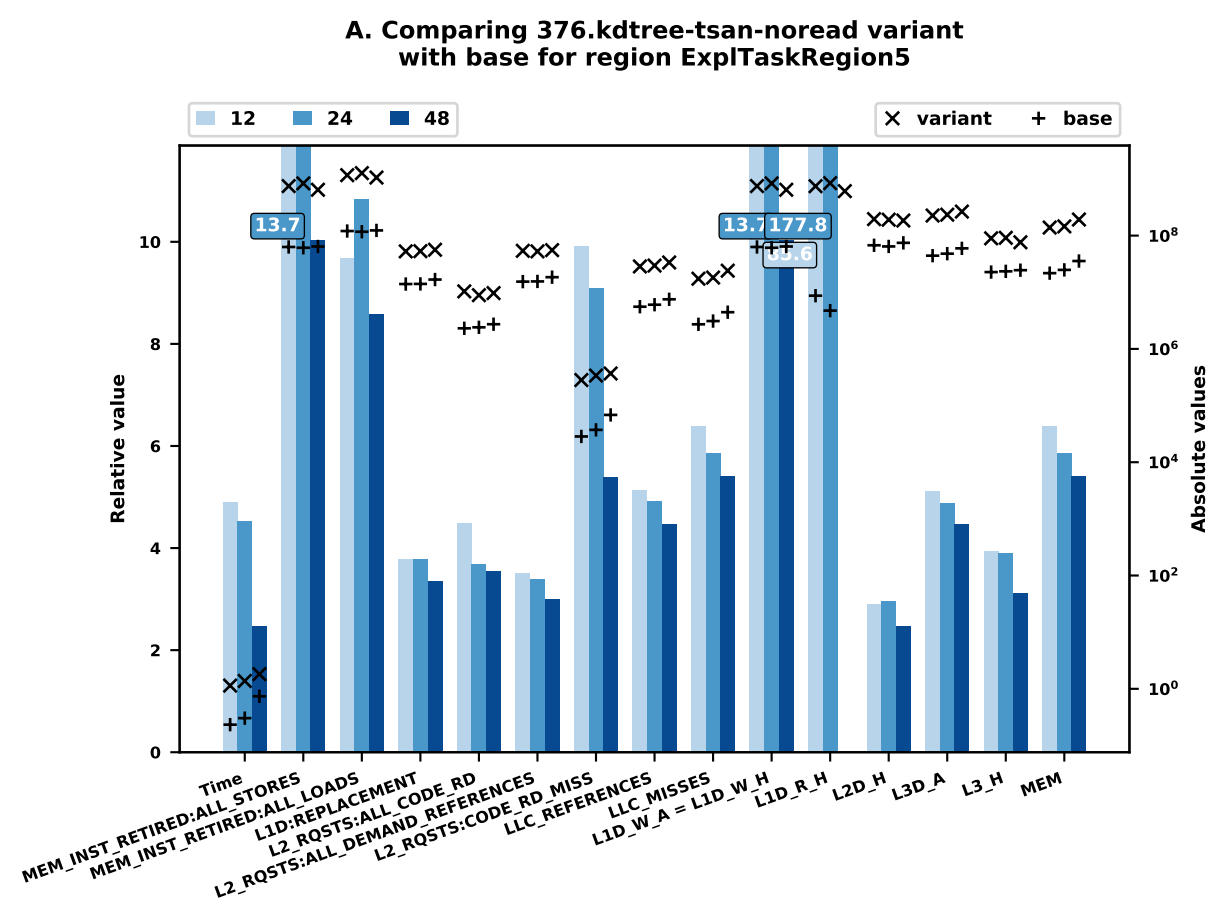

A. Comparing 376.kdtree-archer-noread variant
with base for region ImplTaskRegion4
12
24
48
variant
base
Relative value
Absolute values
10
0
−10
−20
−30
−40
10^9
10^7
10^5
10^3
10^1
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

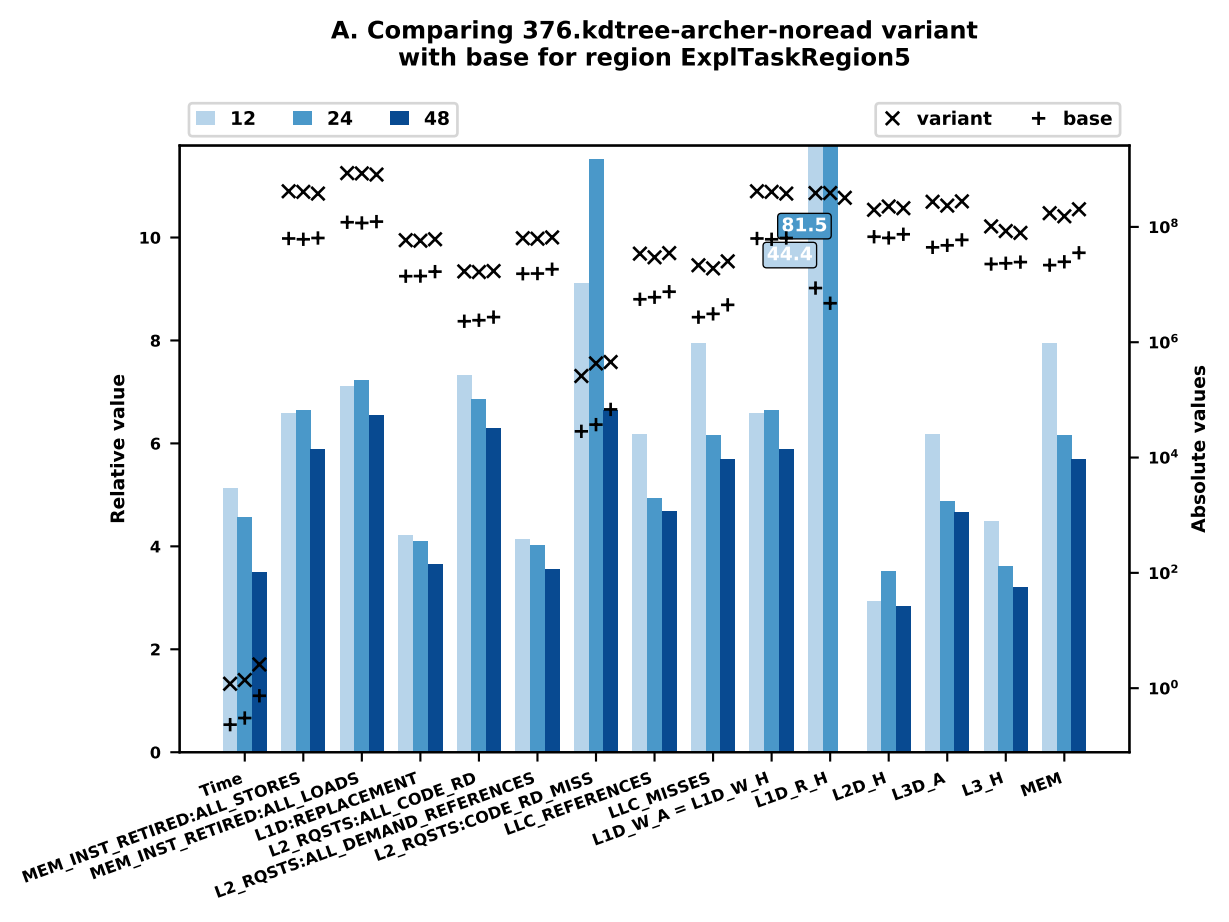

A. Comparing 376.kdtree-tsan-sampling variant
with base for region ImplTaskRegion4
12
24
48
variant
base
Relative value
Absolute values
10
0
−10
−20
−30
−40
−50
10^9
10^7
10^5
10^3
10^1
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

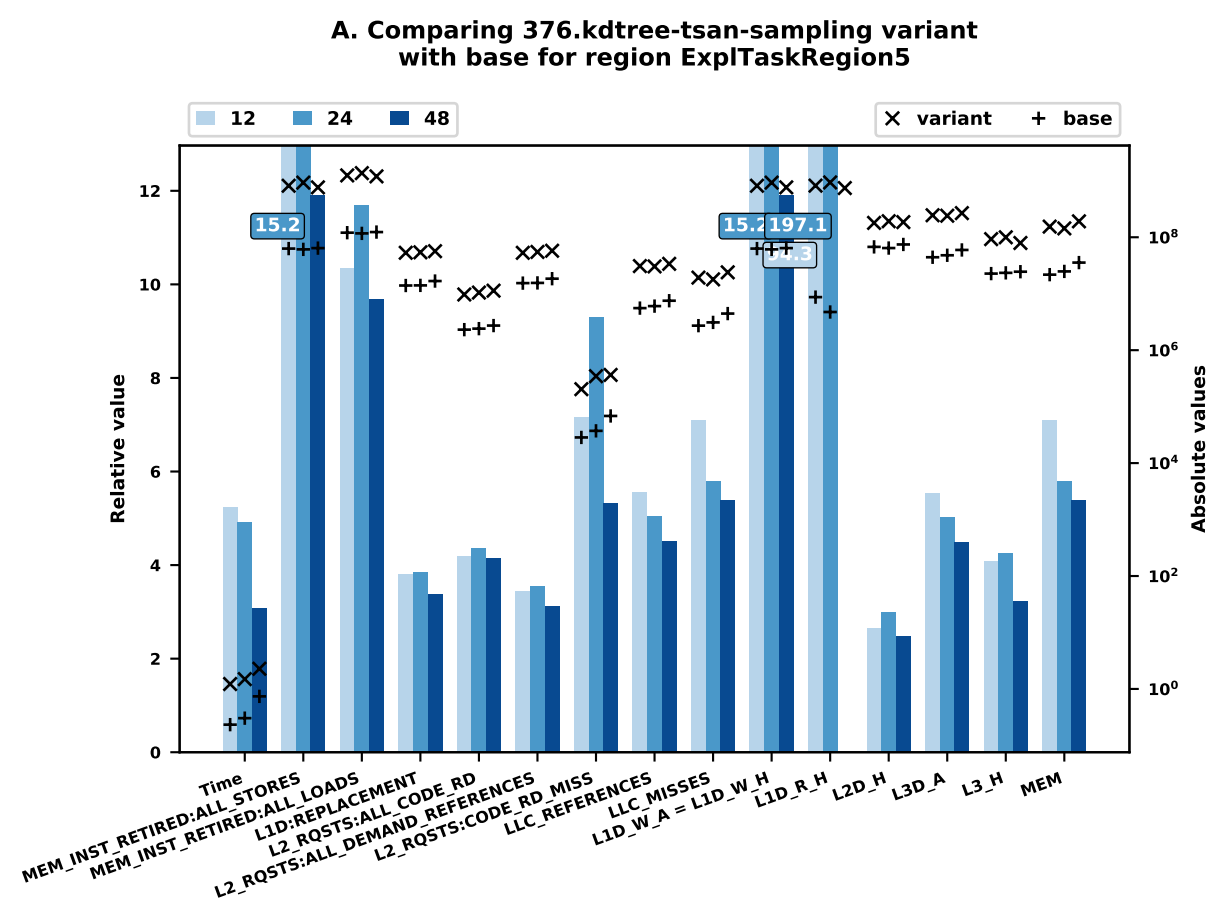

A. Comparing 376.kdtree-archer-sampling variant
with base for region ImplTaskRegion4
12
24
48
variant
base
Relative value
Absolute values
10
0
−10
−20
−30
−40
10^9
10^7
10^5
10^3
10^1
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

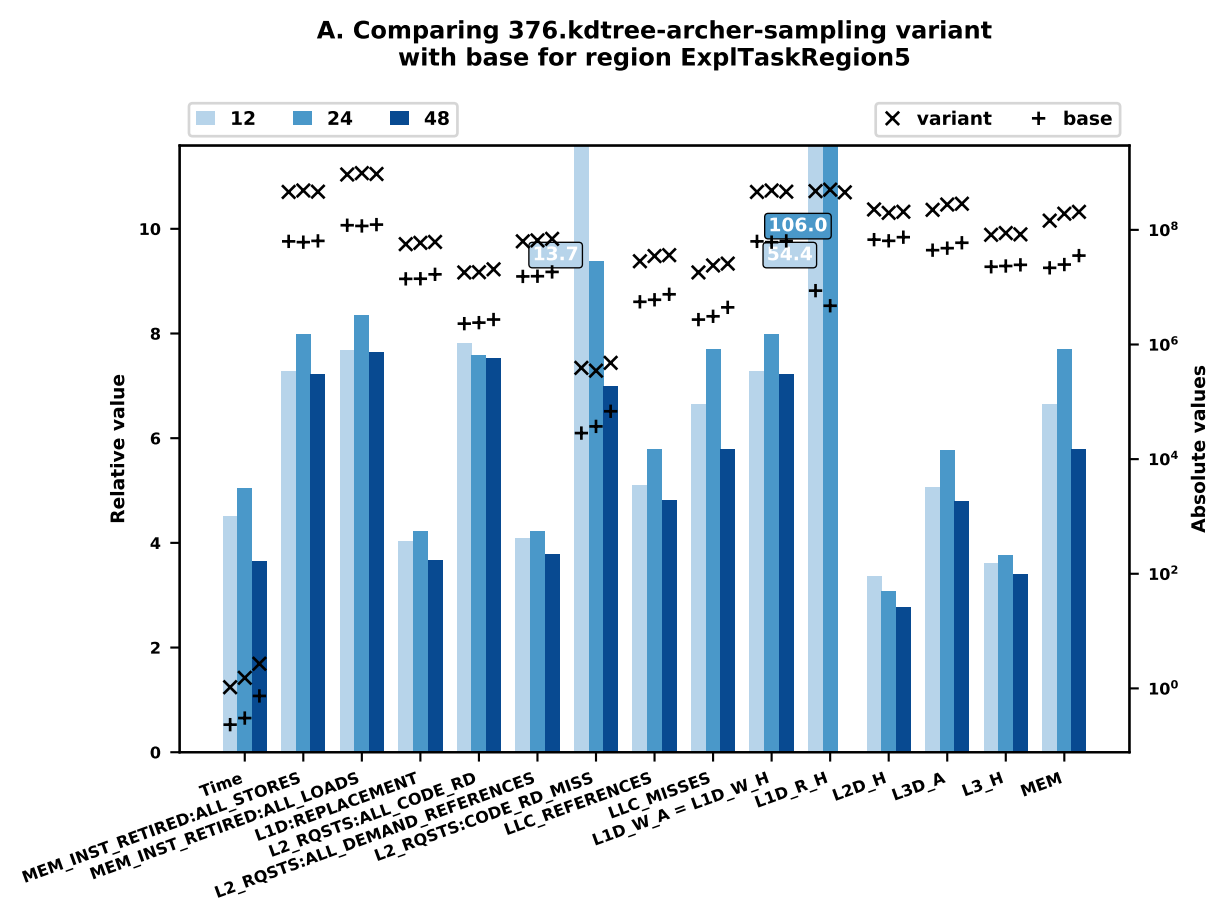

A. Comparing 376.kdtree-tsan variant
with base for region ImplTaskRegion4
12
24
48
variant
base
Relative value
Absolute values
10
0
−10
−20
−30
−40
−50
10^9
10^7
10^5
10^3
10^1
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

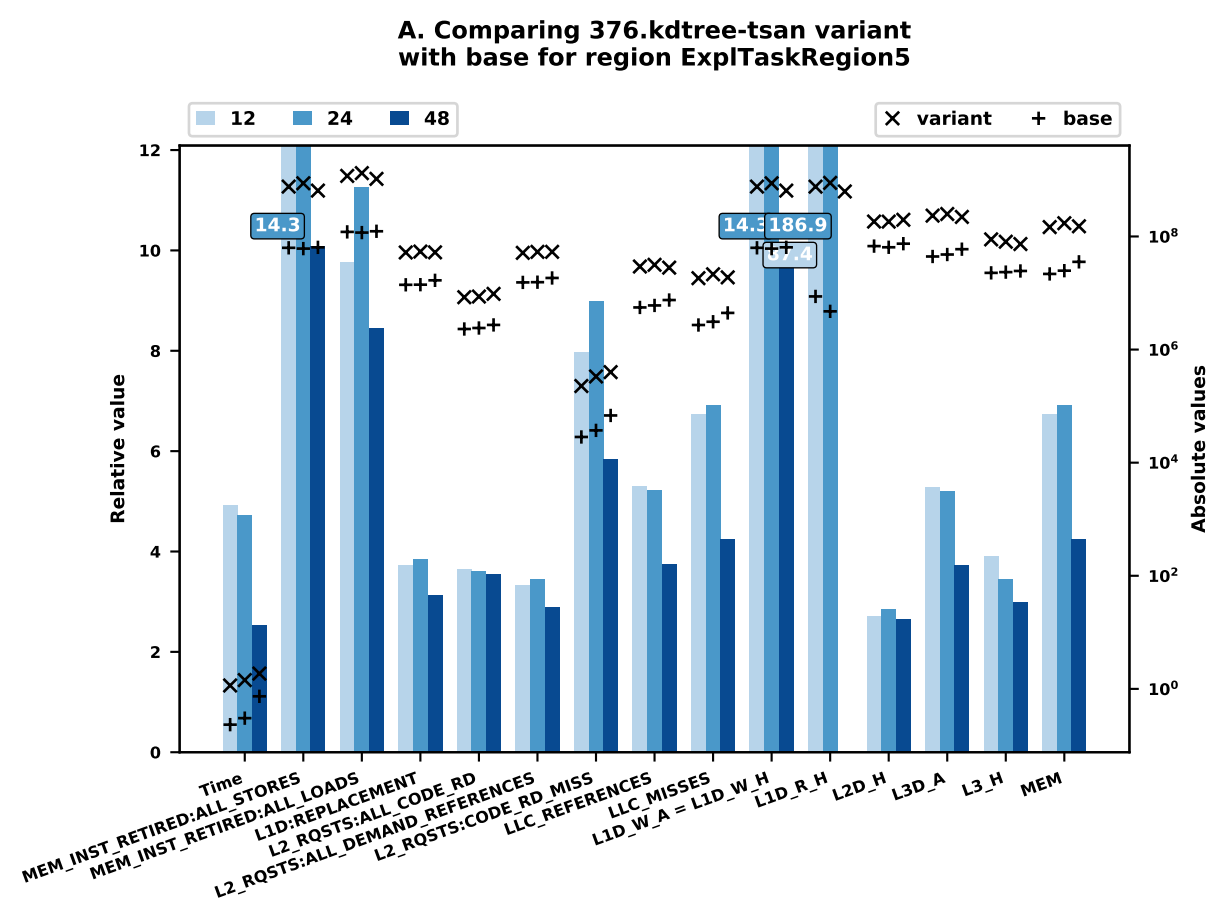

A. Comparing 376.kdtree-archer variant
with base for region ImplTaskRegion4
12
24
48
variant
base
Relative value
Absolute values
10
0
−10
−20
−30
10^9
10^7
10^5
10^3
10^1
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

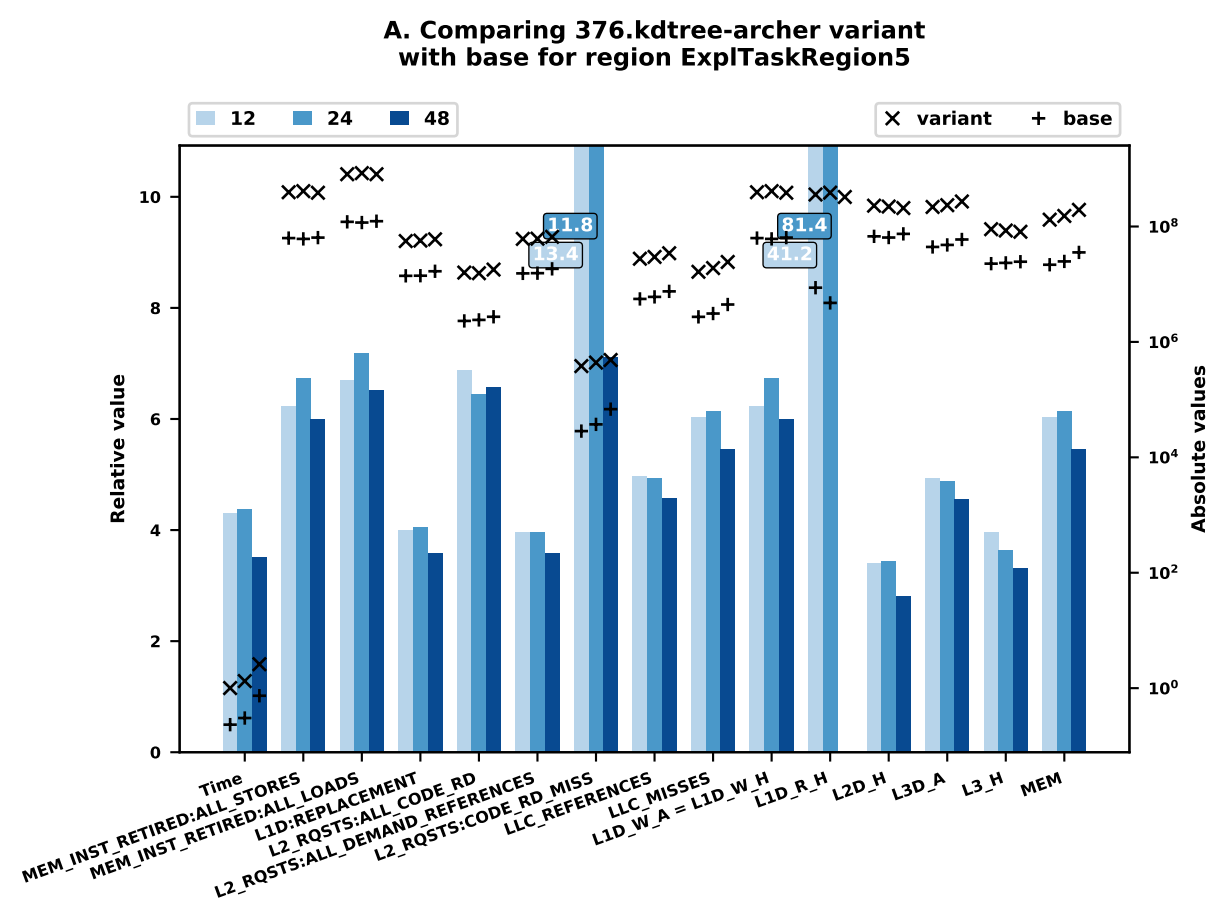

A. Comparing 376.kdtree-tsan-noread variant
with base for region ExplTaskRegion5
12
24
48
variant
base
Relative value
Absolute values
13.7
13.7
177.8
99.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

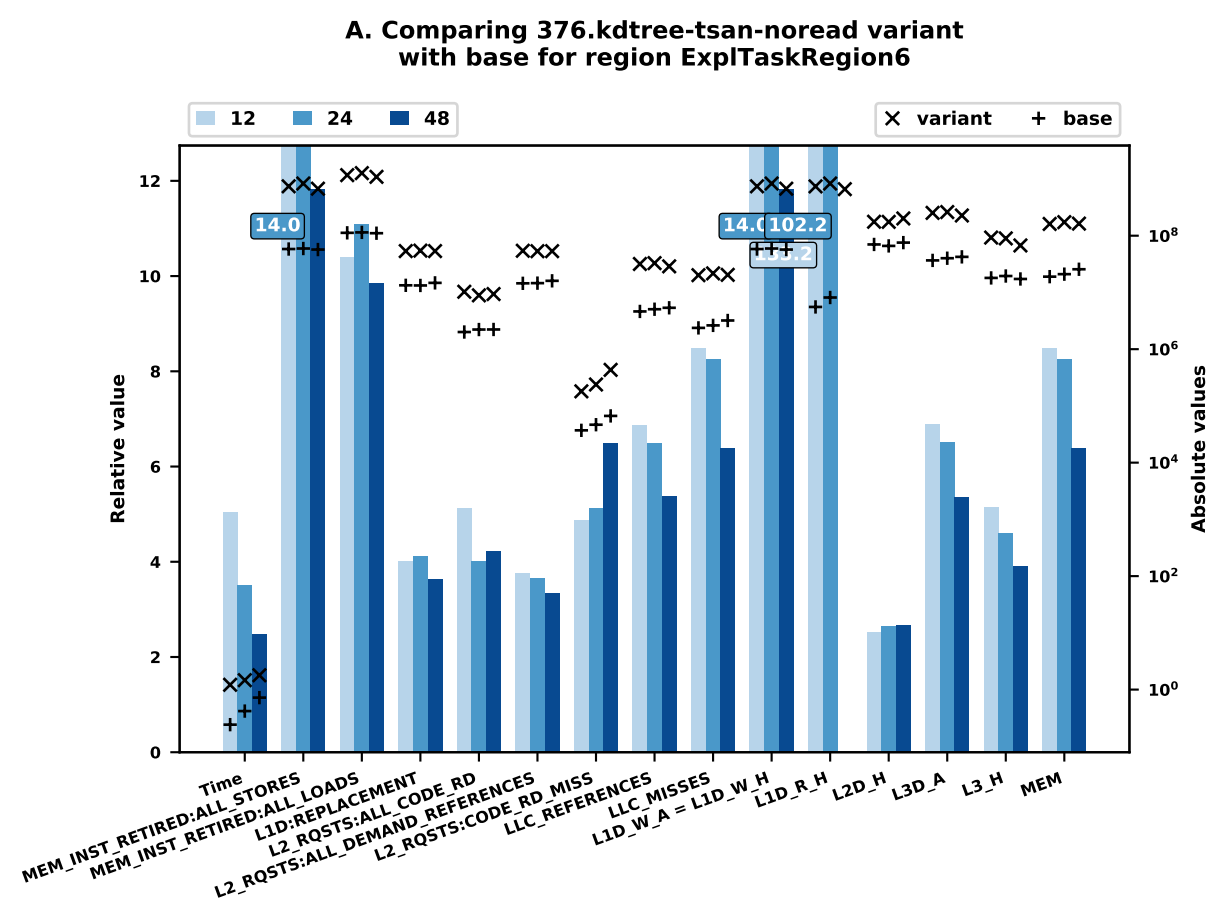

A. Comparing 376.kdtree-archer-noread variant
with base for region ExplTaskRegion5
12
24
48
variant
base
Relative value
Absolute values
81.5
44.4
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

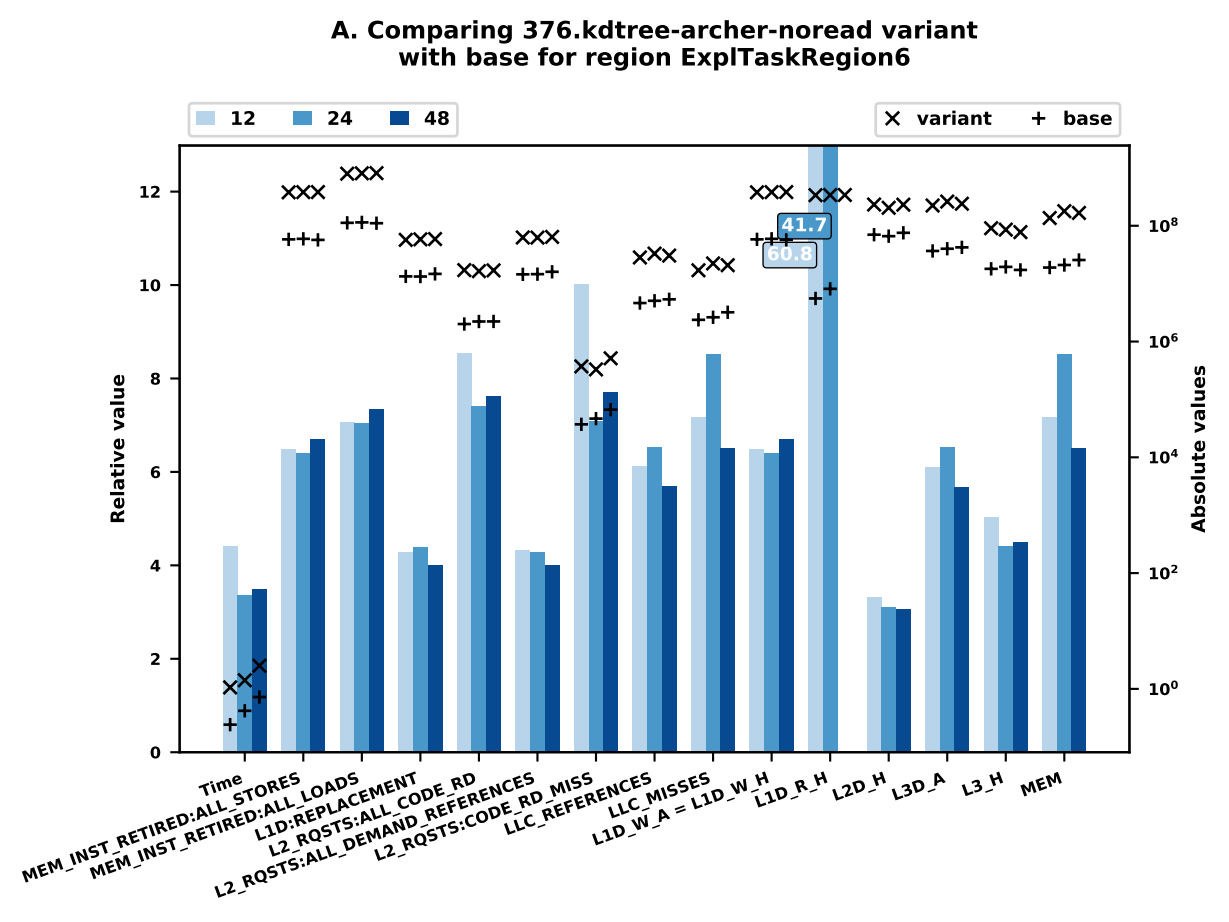

A. Comparing 376.kdtree-tsan-sampling variant
with base for region ExplTaskRegion5
12
24
48
variant
base
Relative value
Absolute values
15.2
15.2
197.1
0
2
4
6
8
10
12
10^0
10^2
10^4
10^6
10^8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

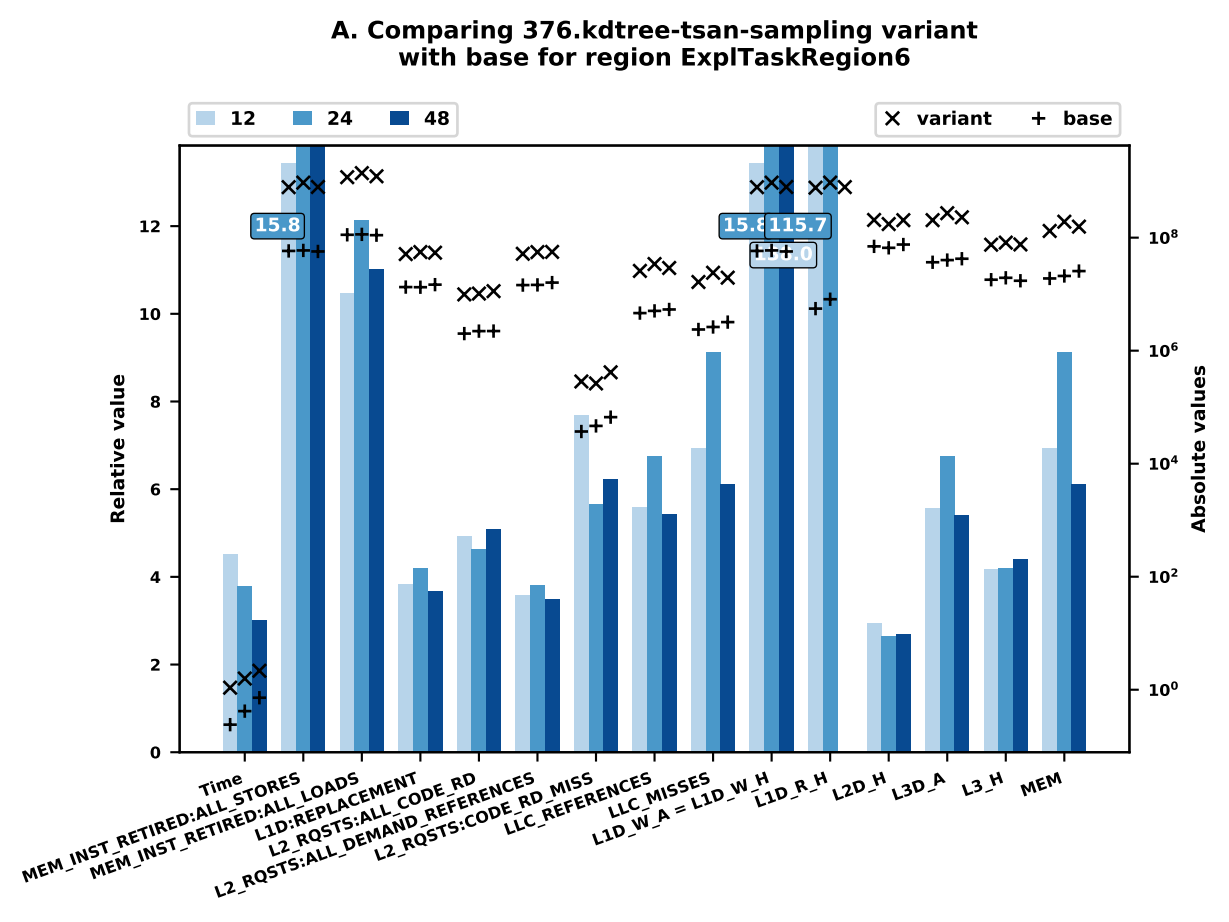

A. Comparing 376.kdtree-archer-sampling variant
with base for region ExplTaskRegion5
12
24
48
variant
base
Relative value
Absolute values
0
2
4
6
8
10
10^0
10^2
10^4
10^6
10^8
13.7
106.0
54.4
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

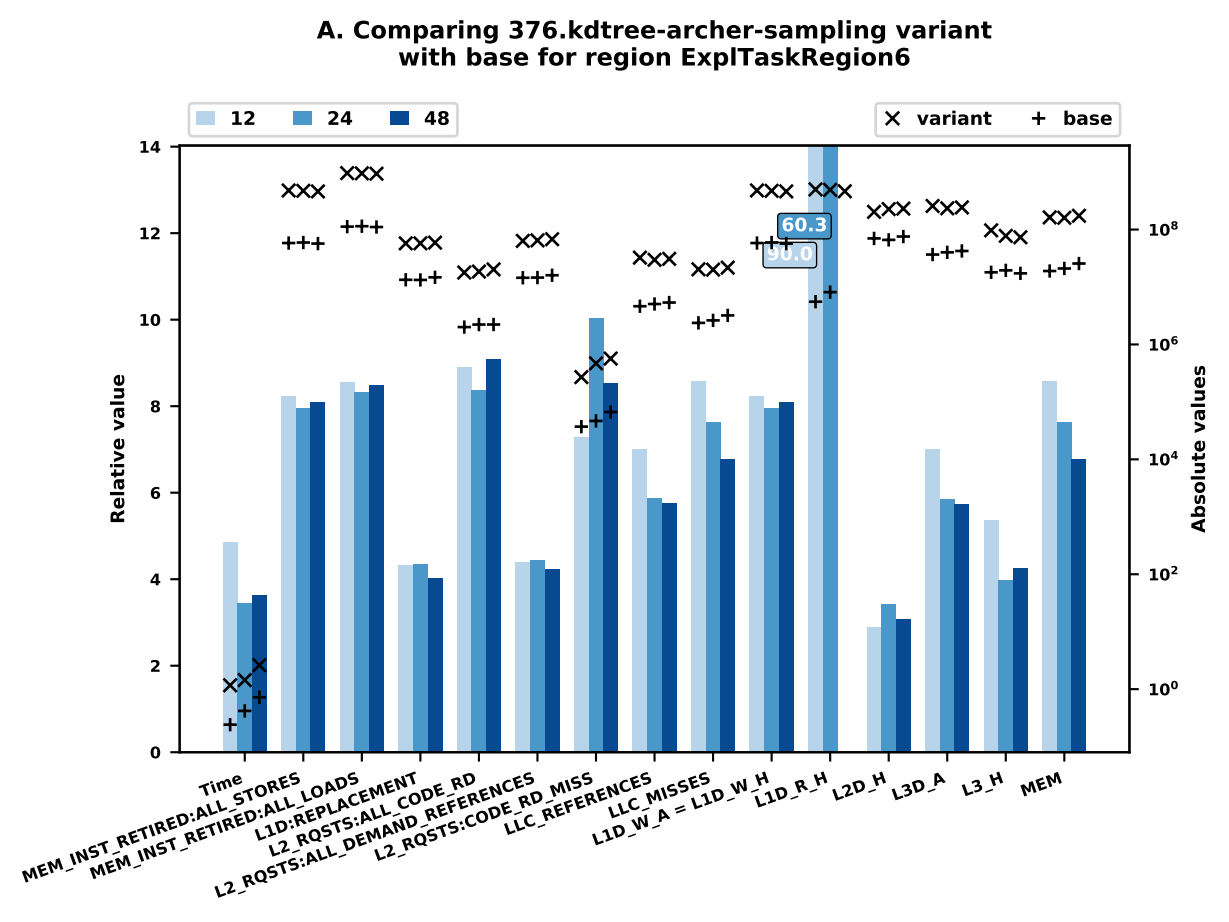

A. Comparing 376.kdtree-tsan variant
with base for region ExplTaskRegion5
12
24
48
variant
base
Relative value
Absolute values
14.3
186.9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

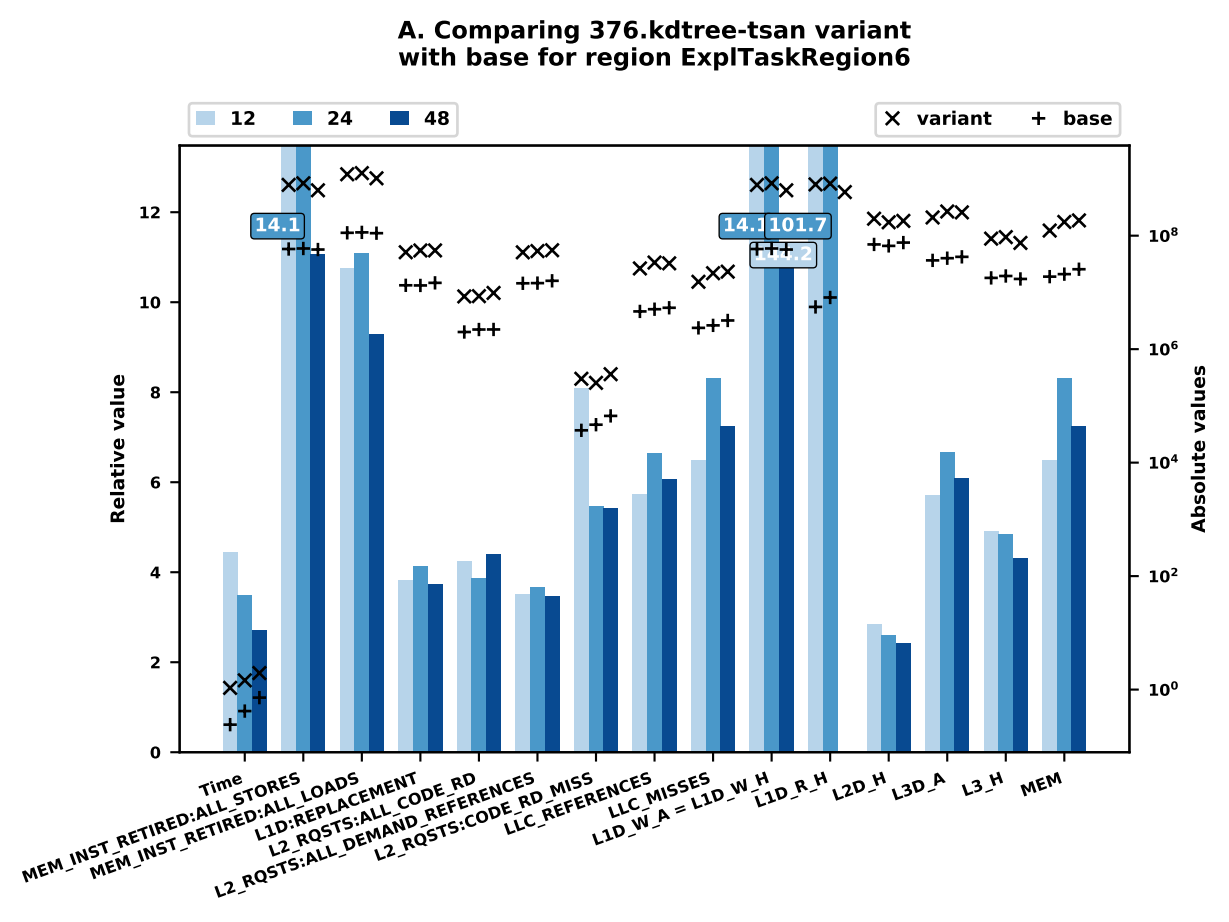

A. Comparing 376.kdtree-archer variant
with base for region ExplTaskRegion5
12
24
48
variant
base
Relative value
Absolute values
0
2
4
6
8
10
10^0
10^2
10^4
10^6
10^8
11.8
13.4
81.4
41.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

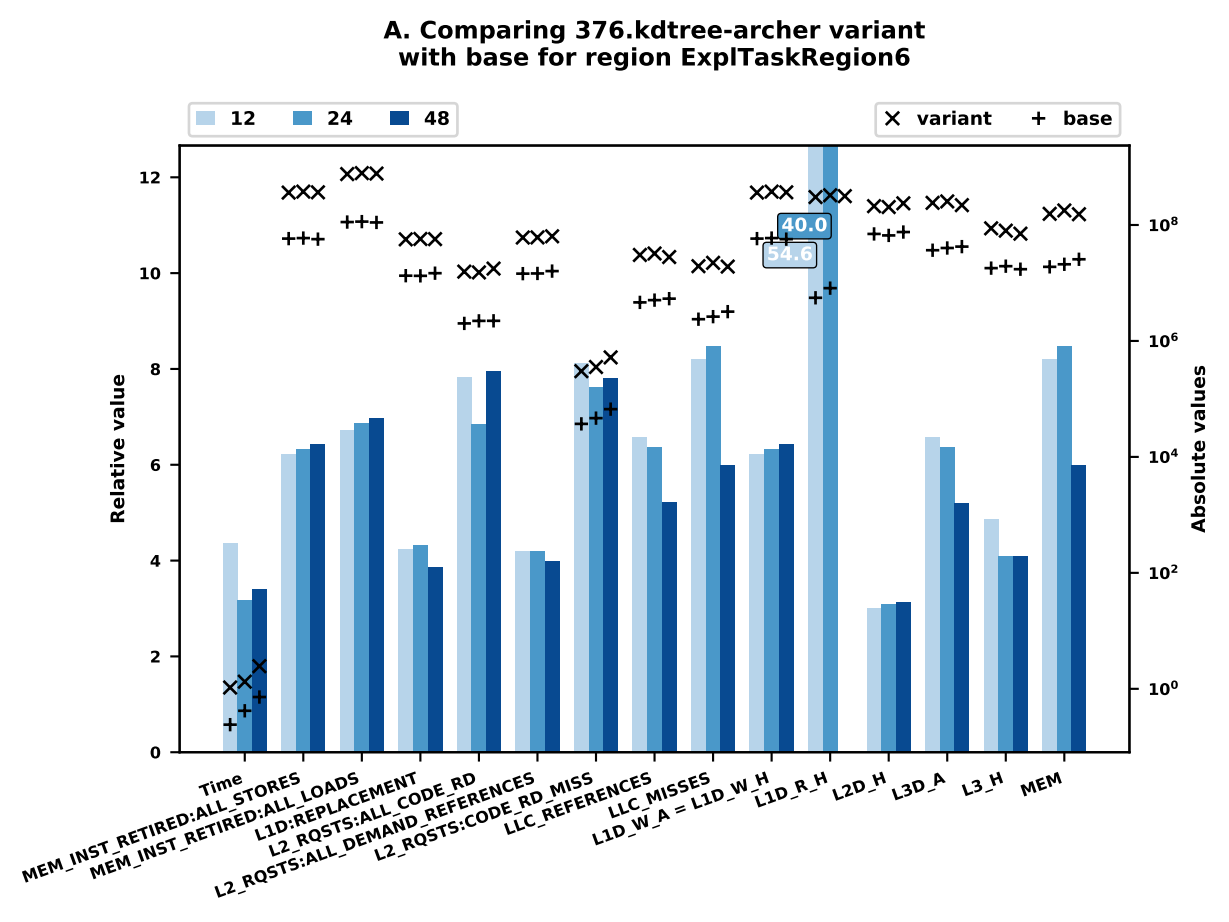

A. Comparing 376.kdtree-tsan-noread variant
with base for region ExplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
14.0
14.0
102.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

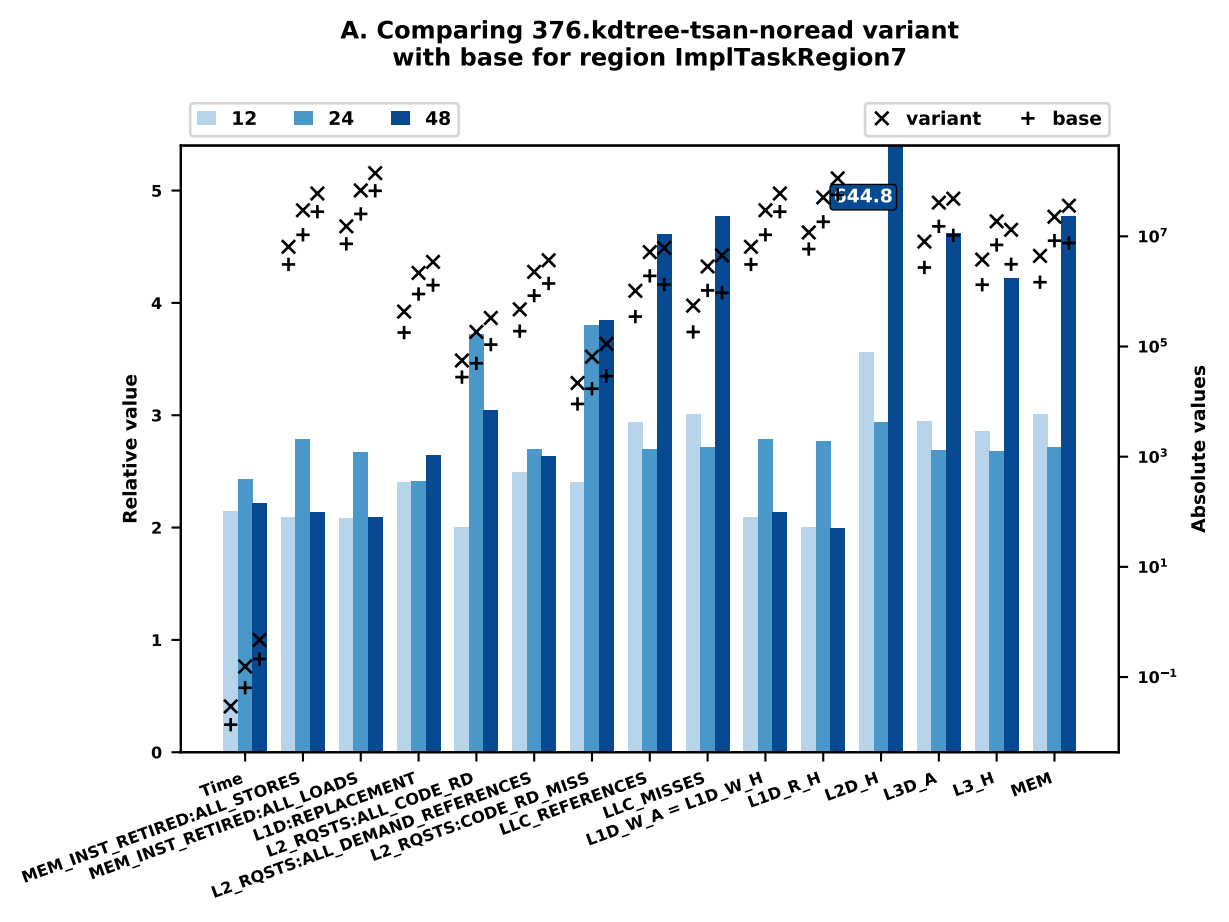

A. Comparing 376.kdtree-archer-noread variant
with base for region ExplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
41.7
60.8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

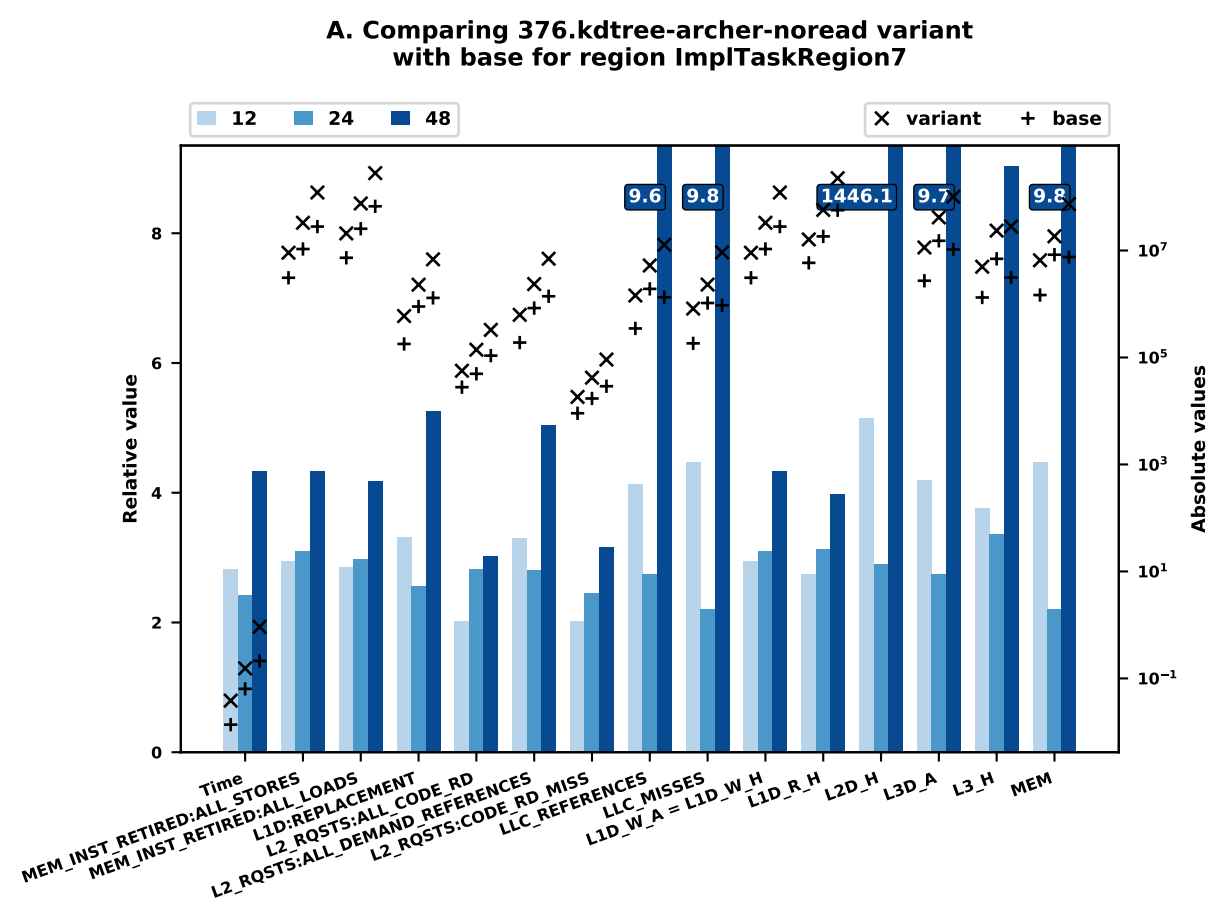

A. Comparing 376.kdtree-tsan-sampling variant
with base for region ExplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
15.8
15.8
115.7
0
2
4
6
8
10
12
10^0
10^2
10^4
10^6
10^8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

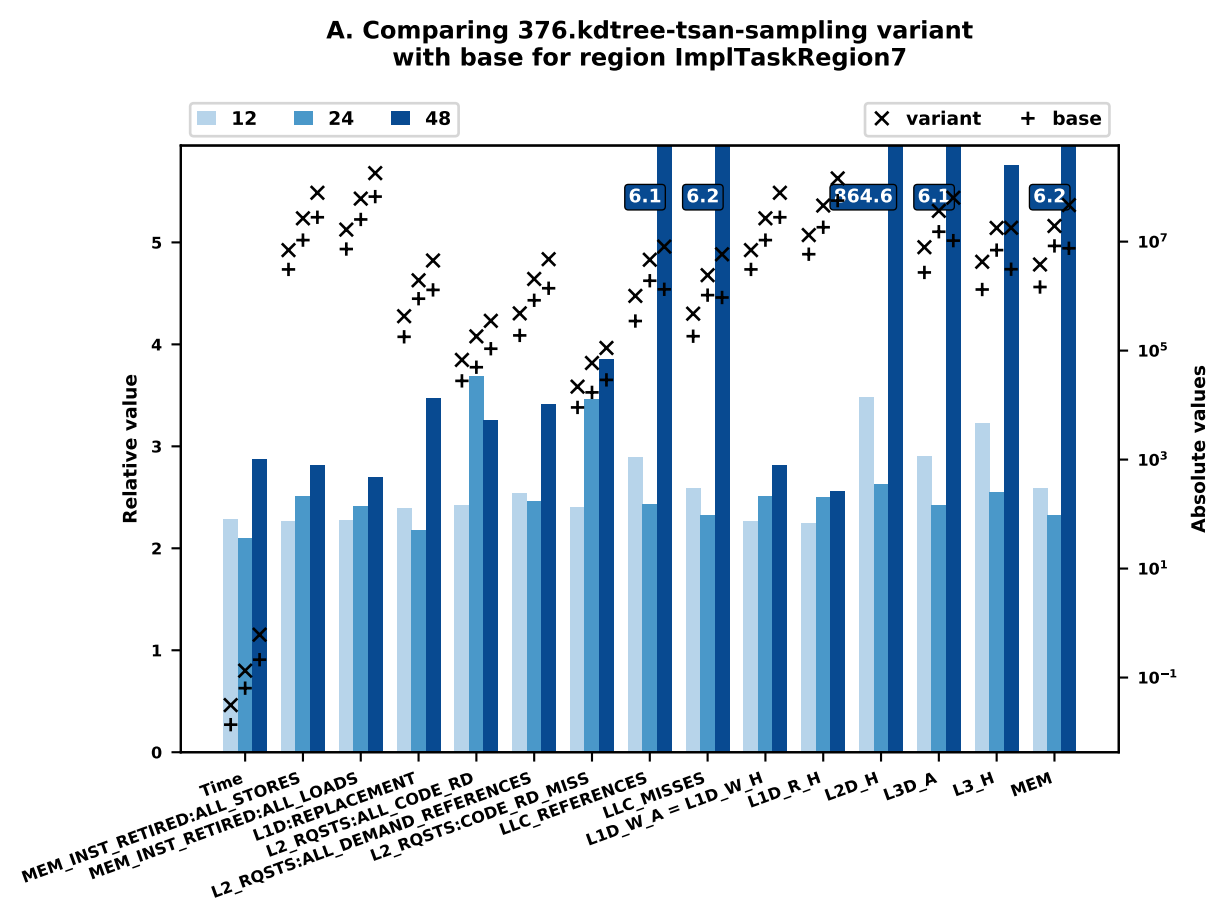

A. Comparing 376.kdtree-archer-sampling variant
with base for region ExplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
60.3
90.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

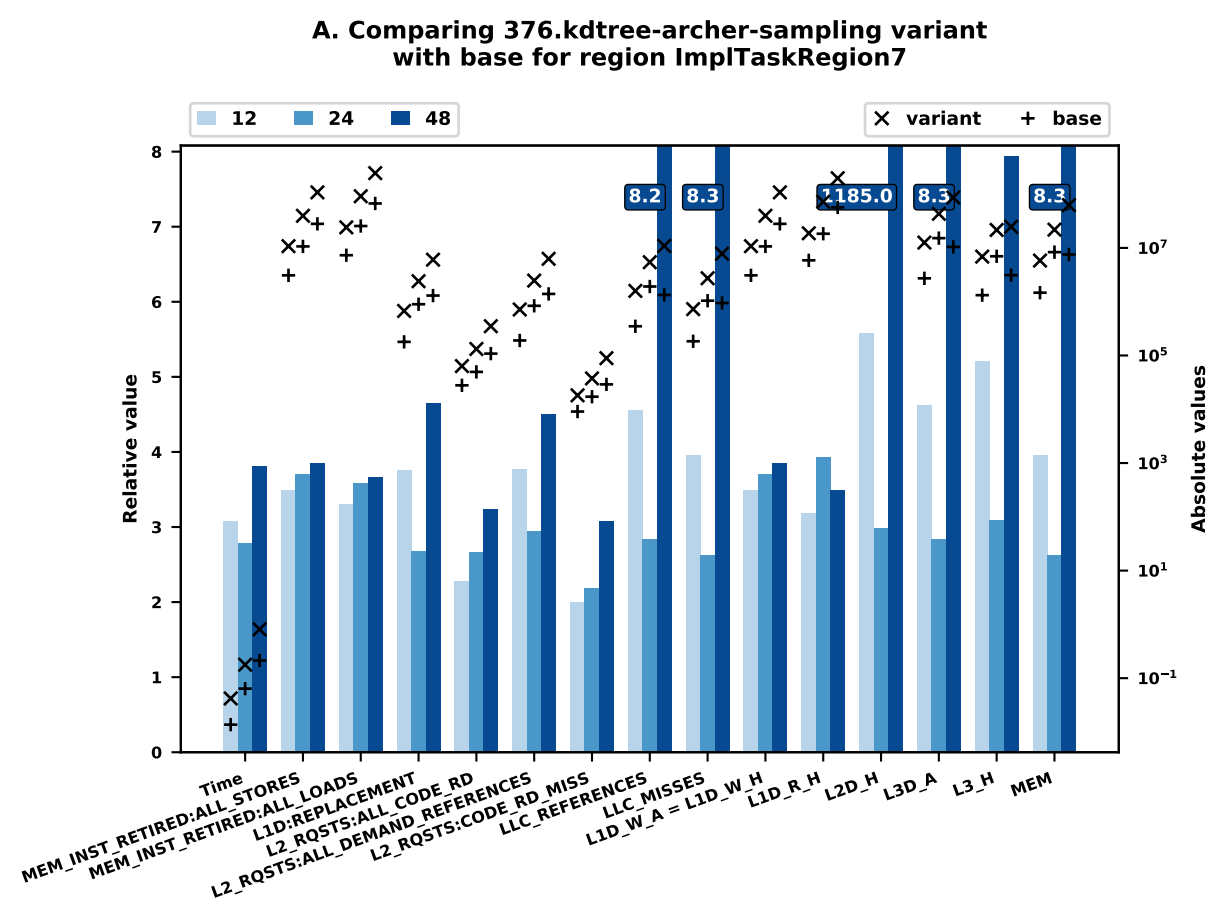

A. Comparing 376.kdtree-tsan variant
with base for region ExplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
14.1
14.1
101.7
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

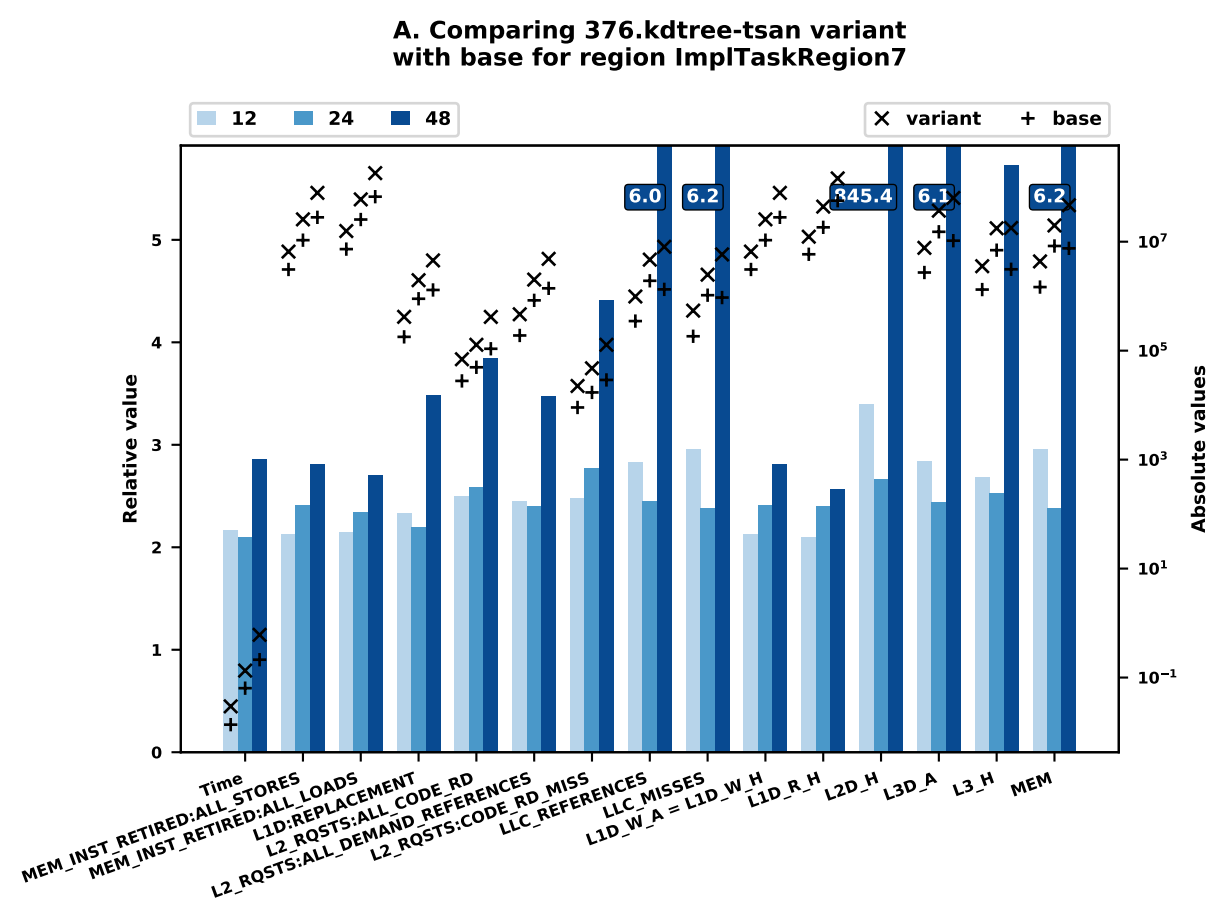

A. Comparing 376.kdtree-archer variant
with base for region ExplTaskRegion6
12
24
48
variant
base
Relative value
Absolute values
40.0
54.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

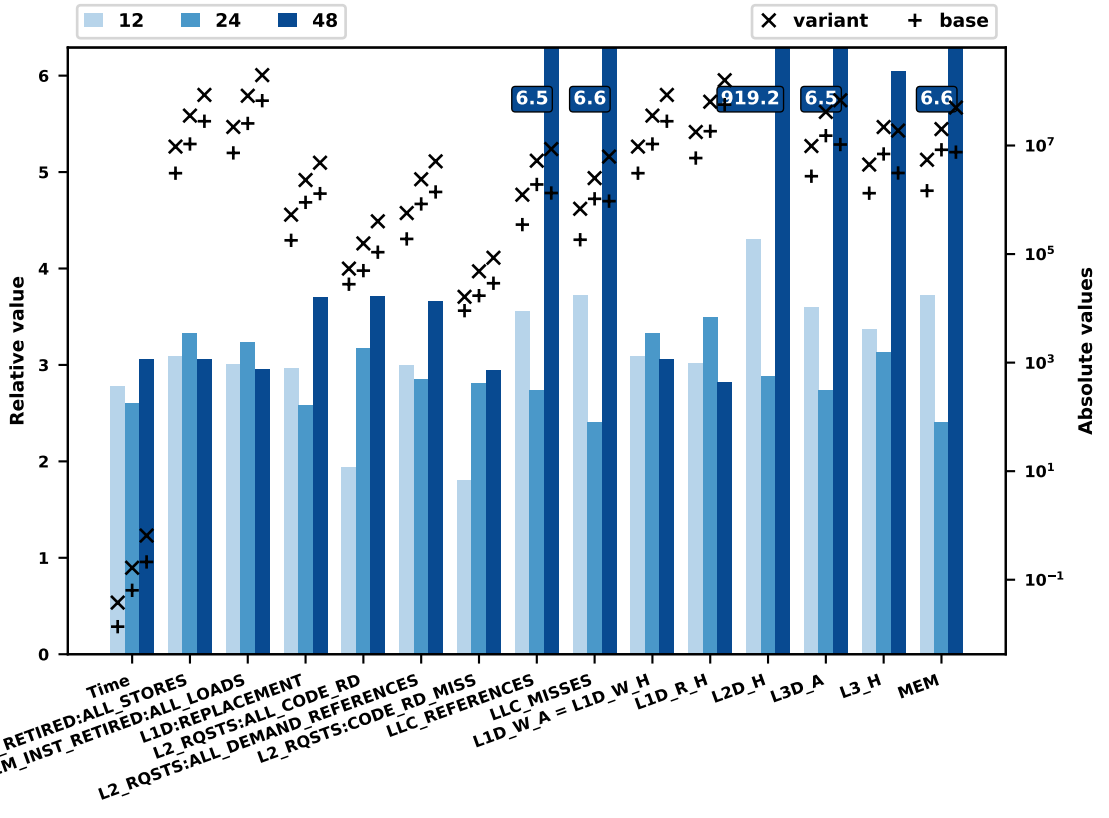

A. Comparing 376.kdtree-tsan-noread variant
with base for region ImplTaskRegion7
12
24
48
variant
base
544.8
Relative value
Absolute values
0
1
2
3
4
5
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

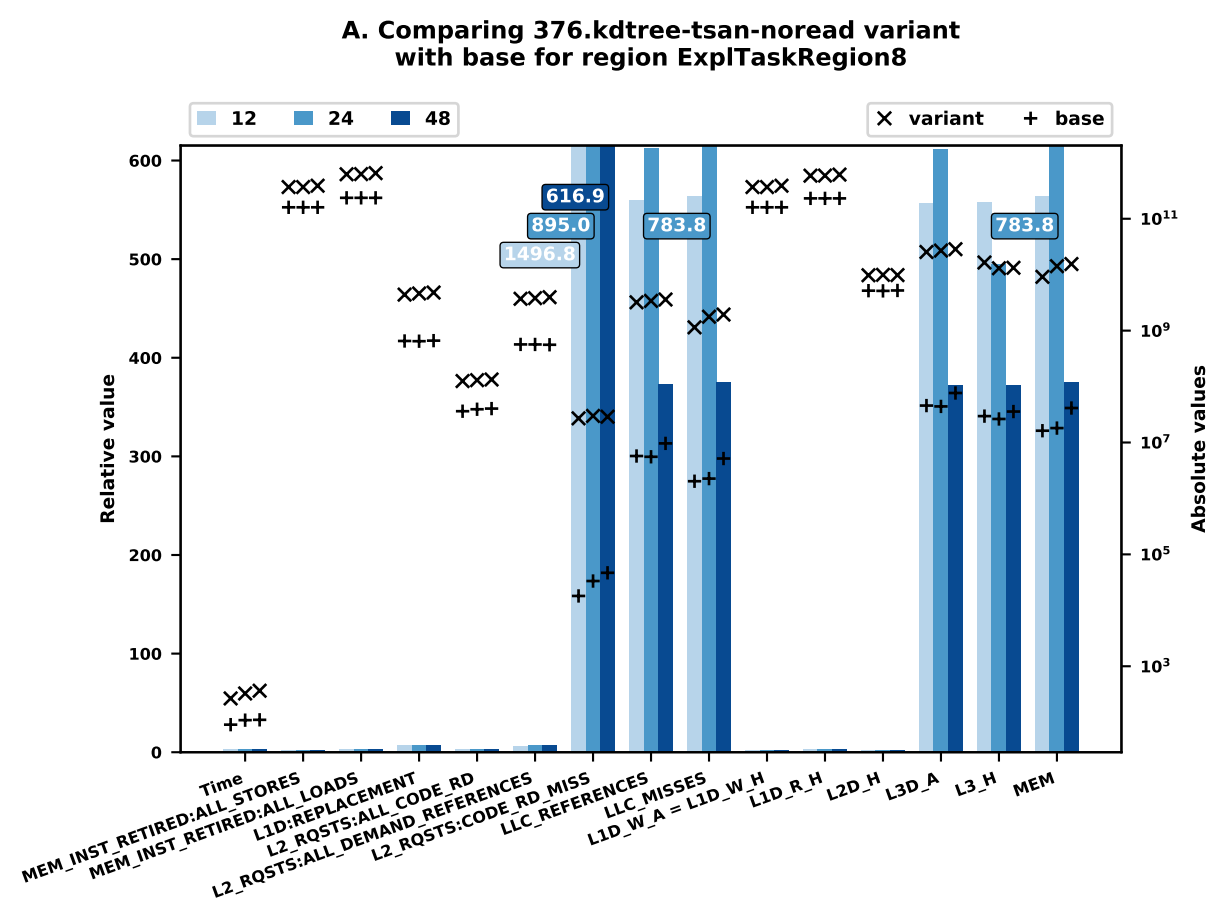

A. Comparing 376.kdtree-archer-noread variant
with base for region ImplTaskRegion7
12
24
48
variant
base
9.6
9.8
1446.1
9.7
9.8
Relative value
Absolute values
0
2
4
6
8
10^{-1}
10^{1}
10^{3}
10^{5}
10^{7}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

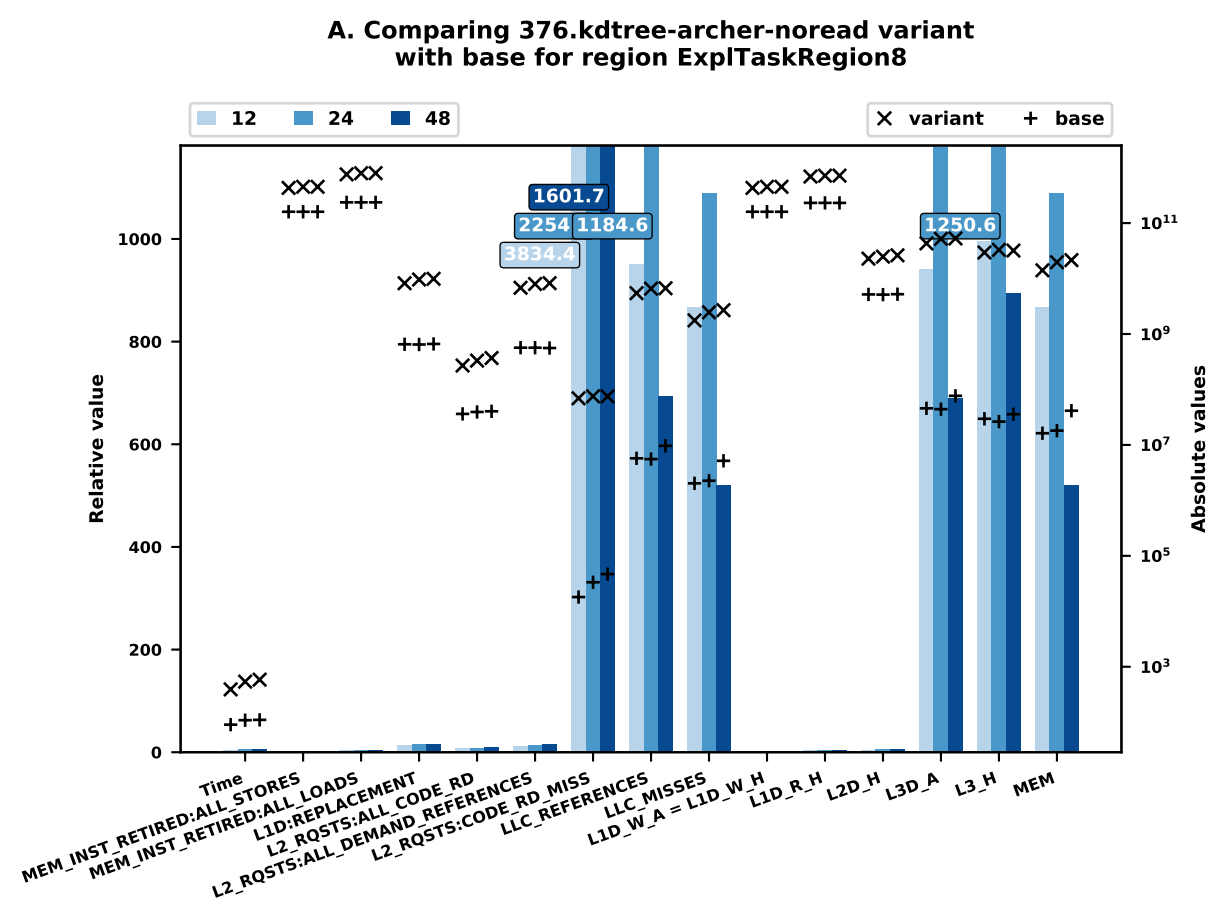

A. Comparing 376.kdtree-tsan-sampling variant
with base for region ImplTaskRegion7
12
24
48
variant
base
Relative value
Absolute values
0
1
2
3
4
5
10^{7}
10^{5}
10^{3}
10^{1}
10^{-1}
6.1
6.2
364.6
6.1
6.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

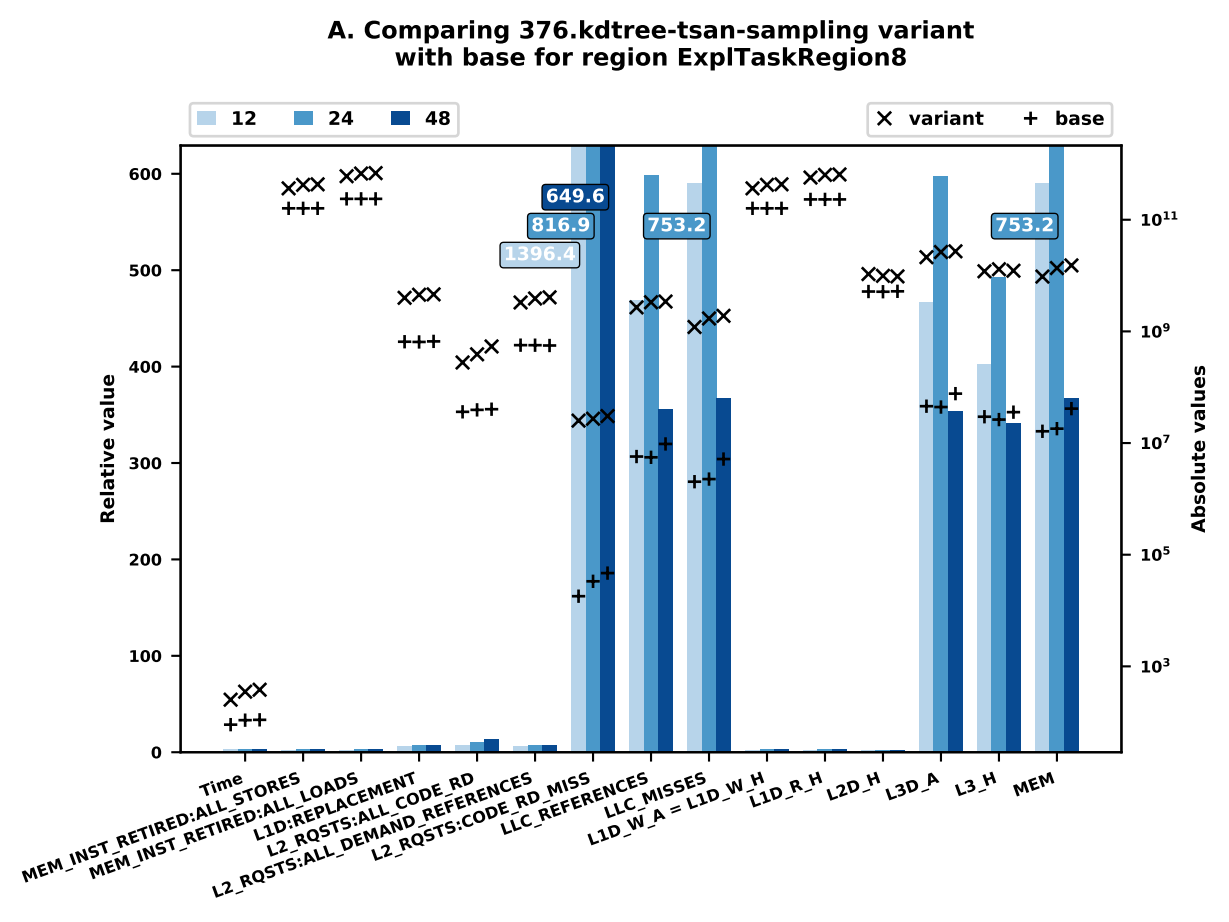

A. Comparing 376.kdtree-archer-sampling variant
with base for region ImplTaskRegion7
12
24
48
variant
base
Relative value
Absolute values
8.2
8.3
2185.0
8.3
8.3
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

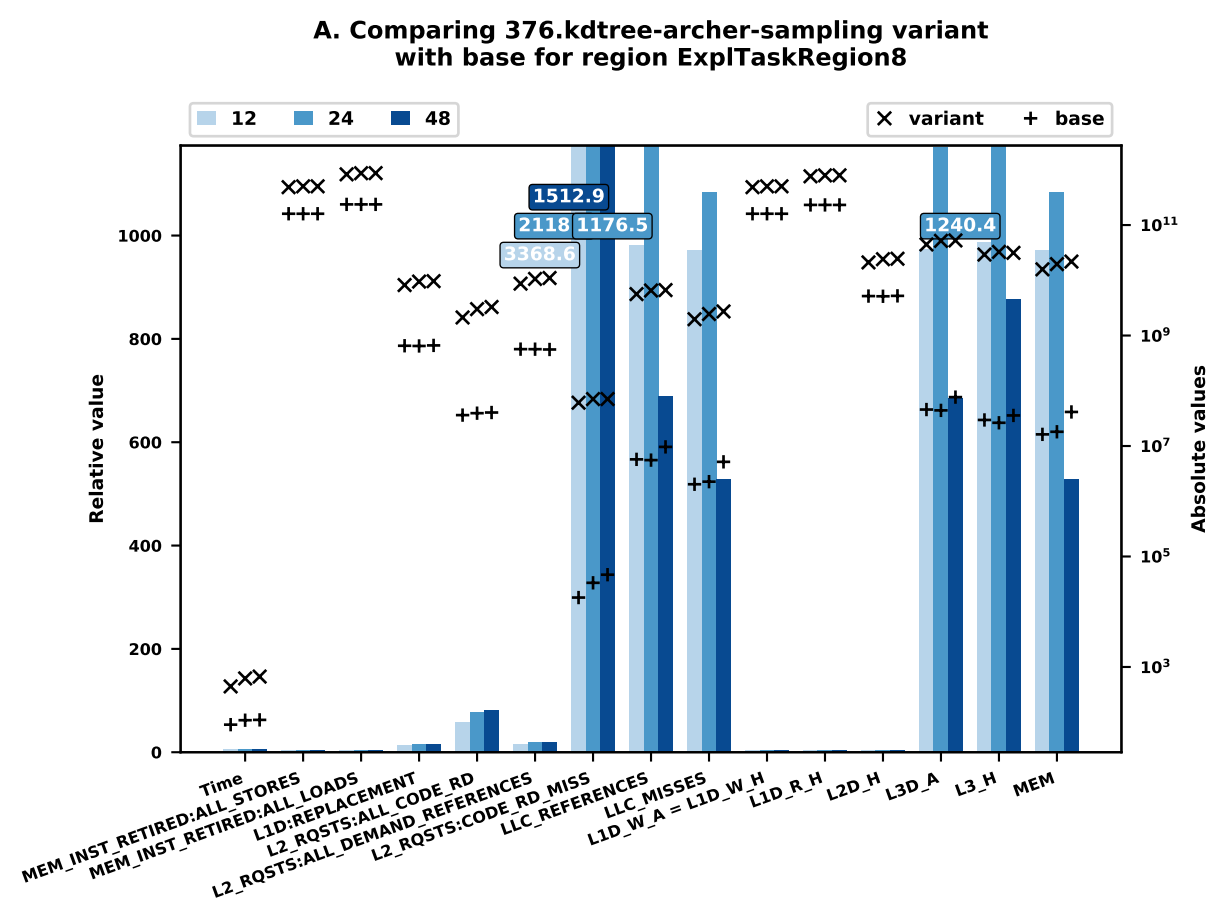

A. Comparing 376.kdtree-tsan variant
with base for region ImplTaskRegion7
12
24
48
variant
base
6.0
6.2
345.4
6.1
6.2
Relative value
Absolute values
0
1
2
3
4
5
10^{-1}
10^{1}
10^{3}
10^{5}
10^{7}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

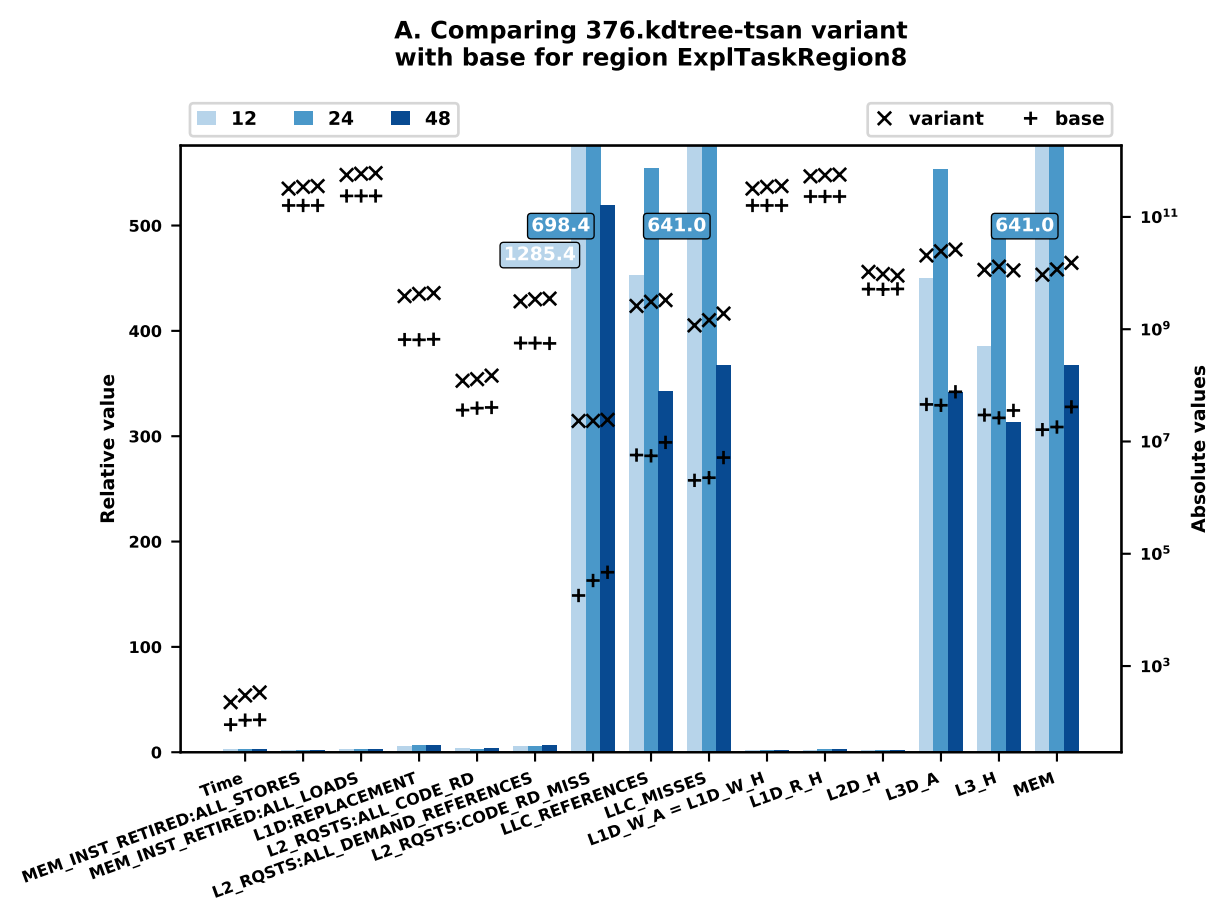

A. Comparing 376.kdtree-archer variant
with base for region ImplTaskRegion7
12
24
48
variant
base
Relative value
Absolute values
6.5
6.6
919.2
6.5
6.6
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

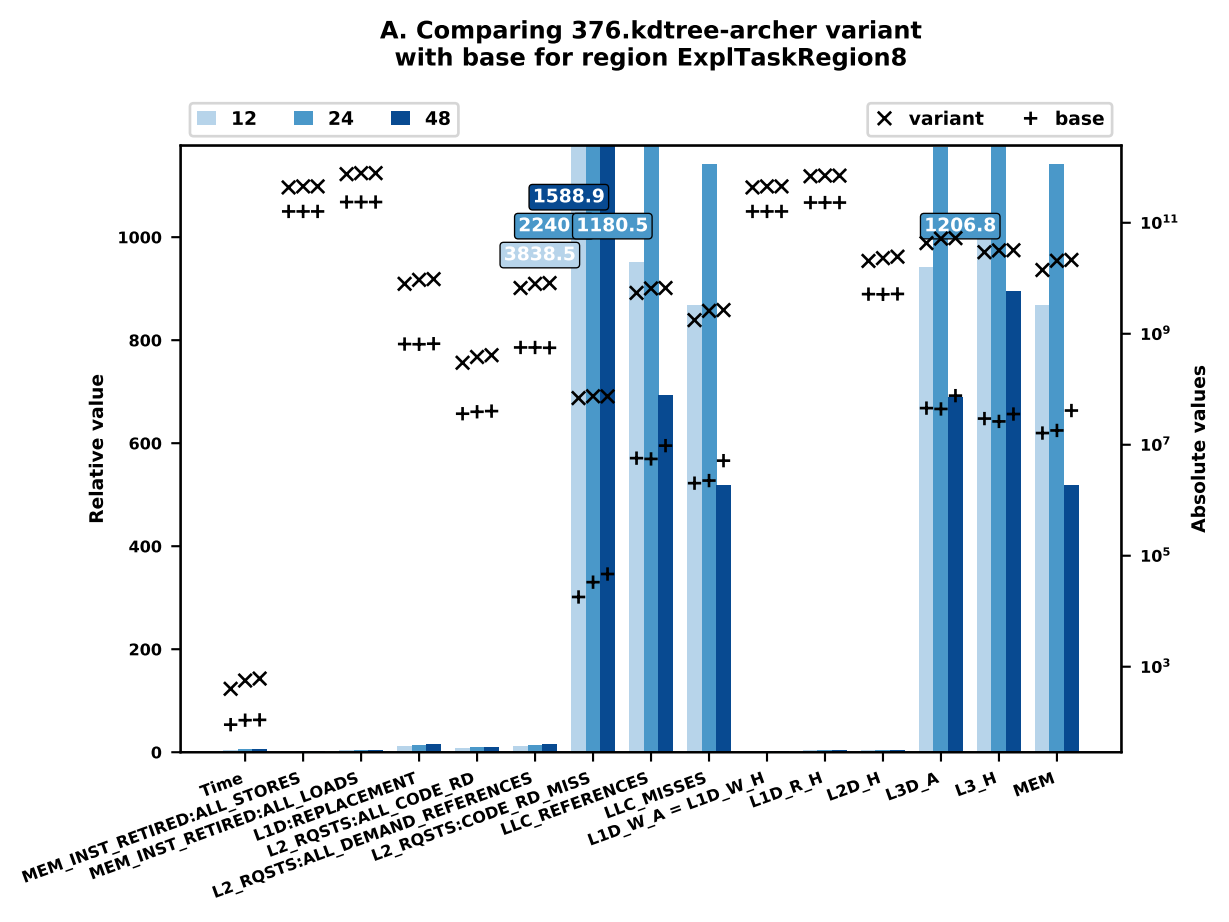

A. Comparing 376.kdtree-tsan-noread variant
with base for region ExplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
616.9
895.0
1496.8
783.8
783.8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

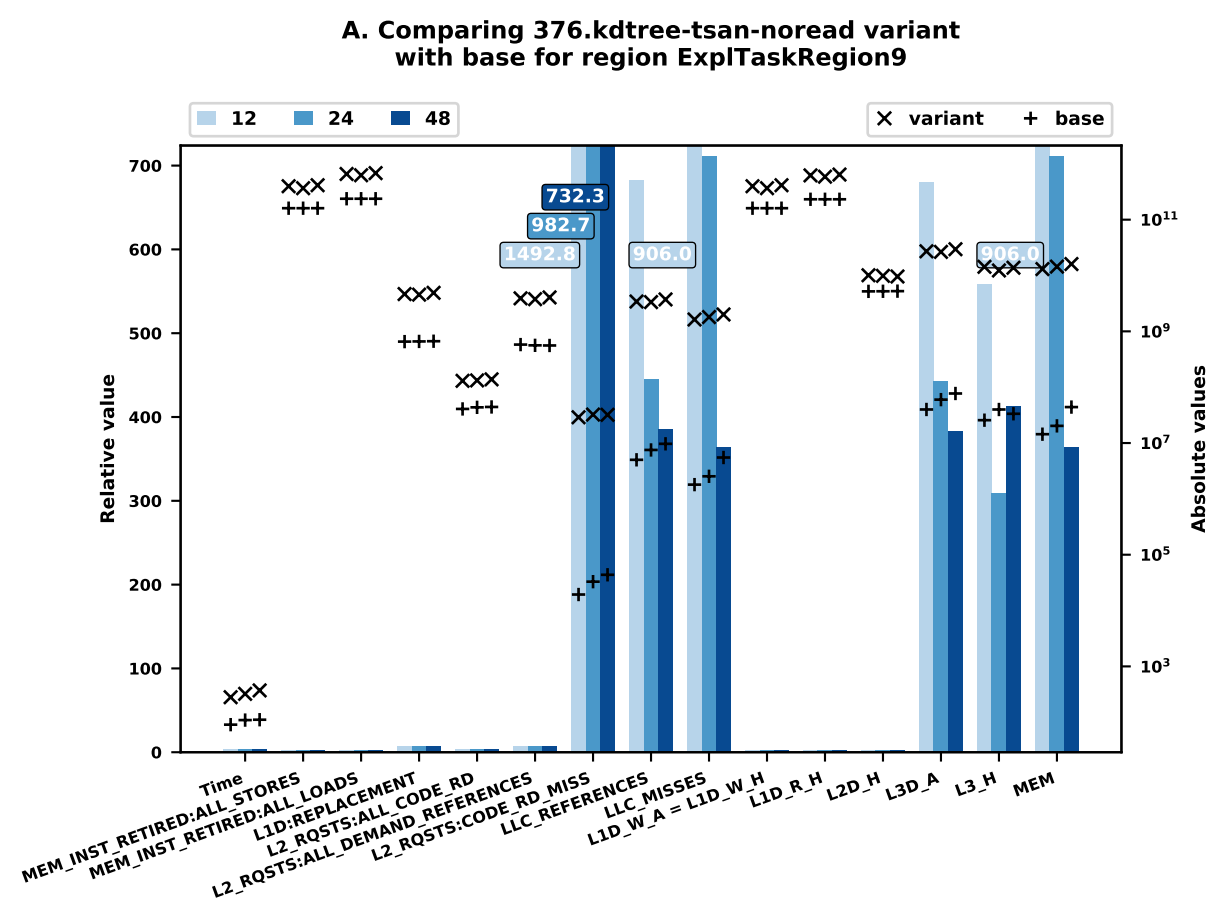

A. Comparing 376.kdtree-archer-noread variant
with base for region ExplTaskRegion8
12
24
48
variant
base
1601.7
2254
1184.6
3834.4
1250.6
Relative value
Absolute values
0
200
400
600
800
1000
10^3
10^5
10^7
10^9
10^{11}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

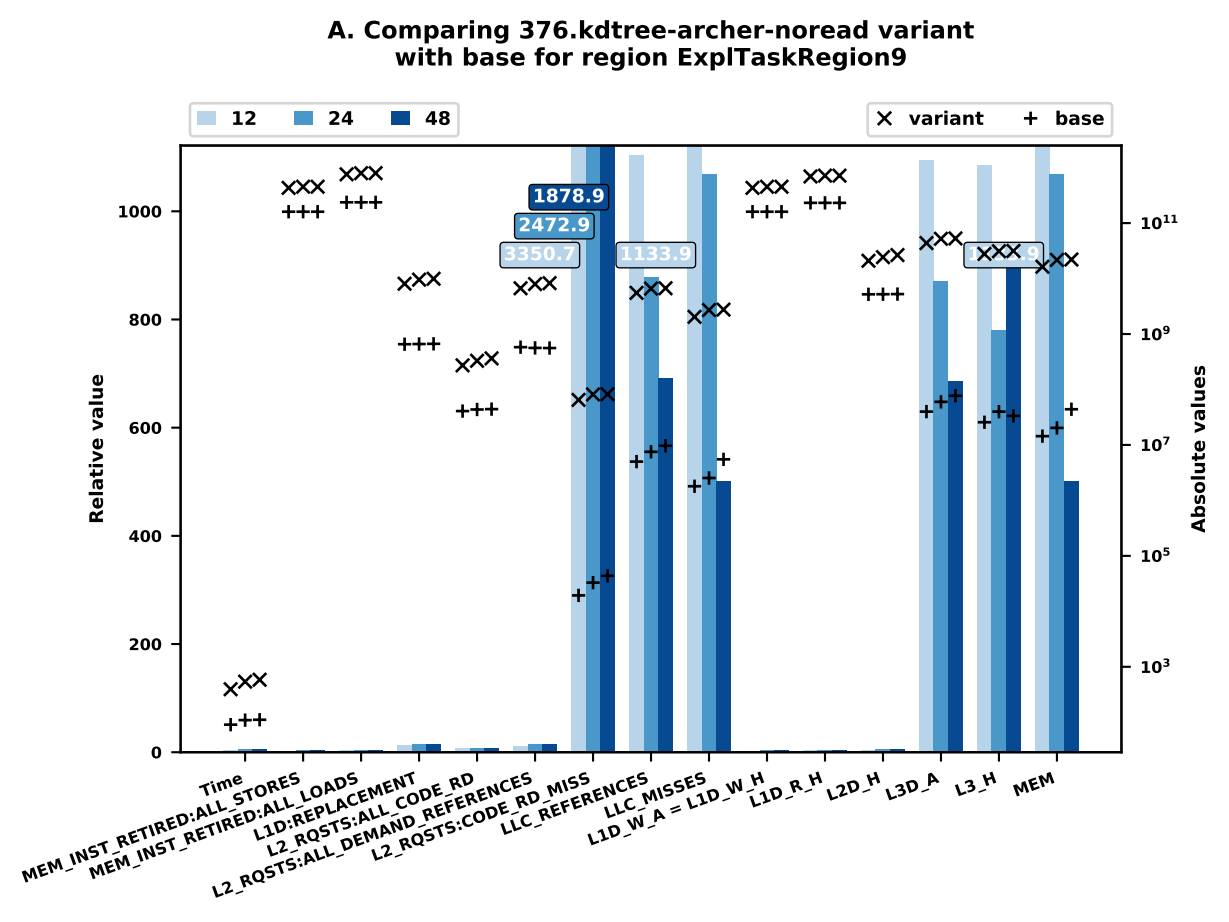

A. Comparing 376.kdtree-tsan-sampling variant
with base for region ExplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
649.6
816.9
1396.4
753.2
753.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

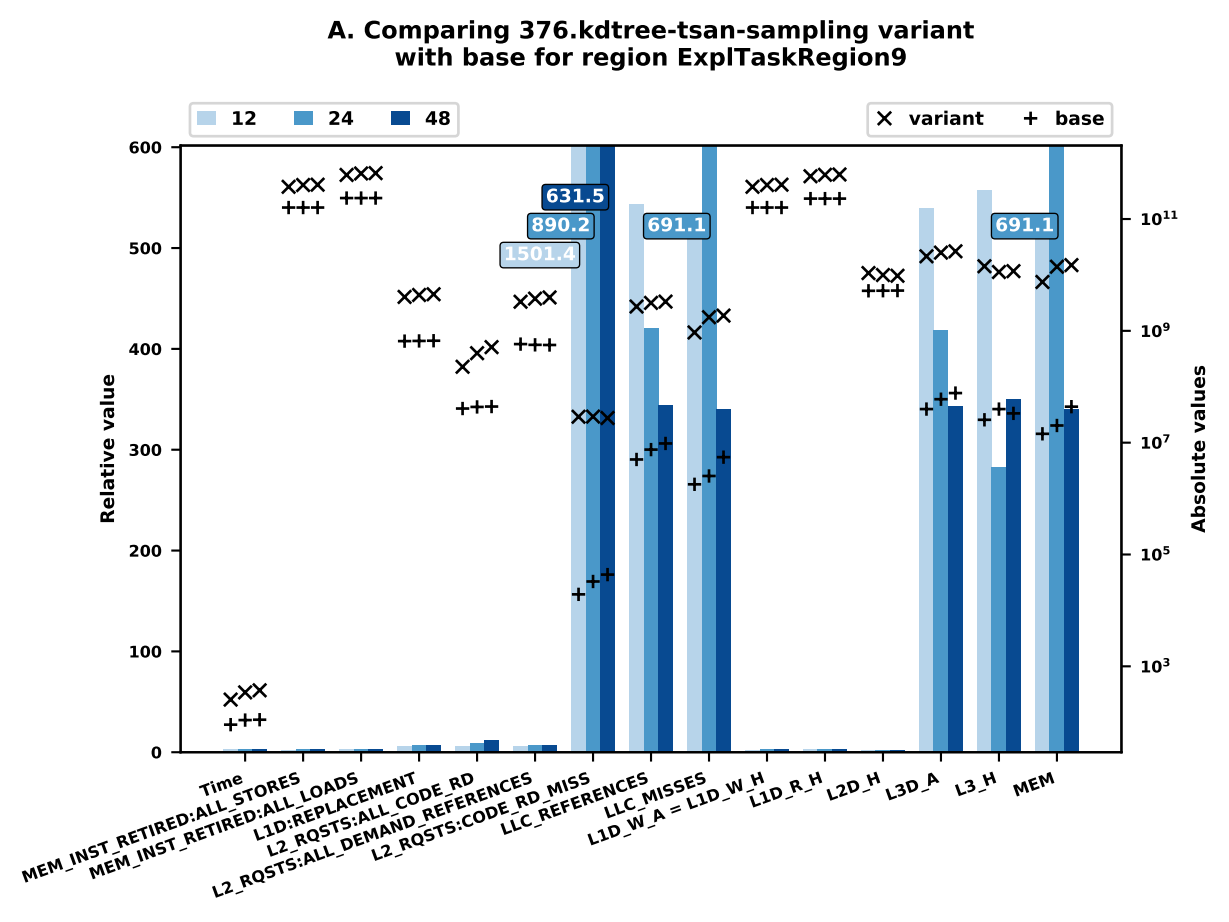

A. Comparing 376.kdtree-archer-sampling variant
with base for region ExplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
0
200
400
600
800
1000
10^3
10^5
10^7
10^9
10^{11}
1512.9
2118
1176.5
3368.6
1240.4
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

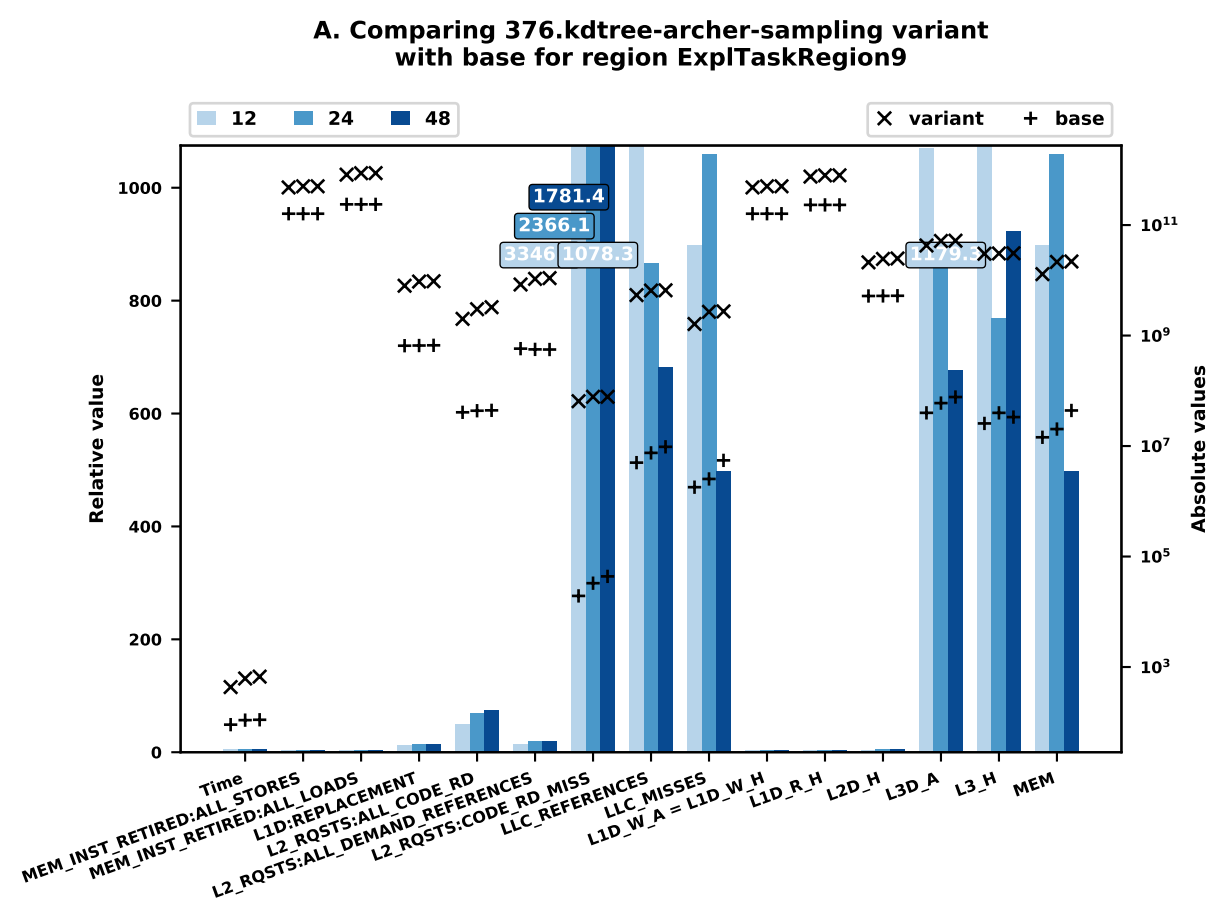

A. Comparing 376.kdtree-tsan variant
with base for region ExplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
698.4
1285.4
641.0
641.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

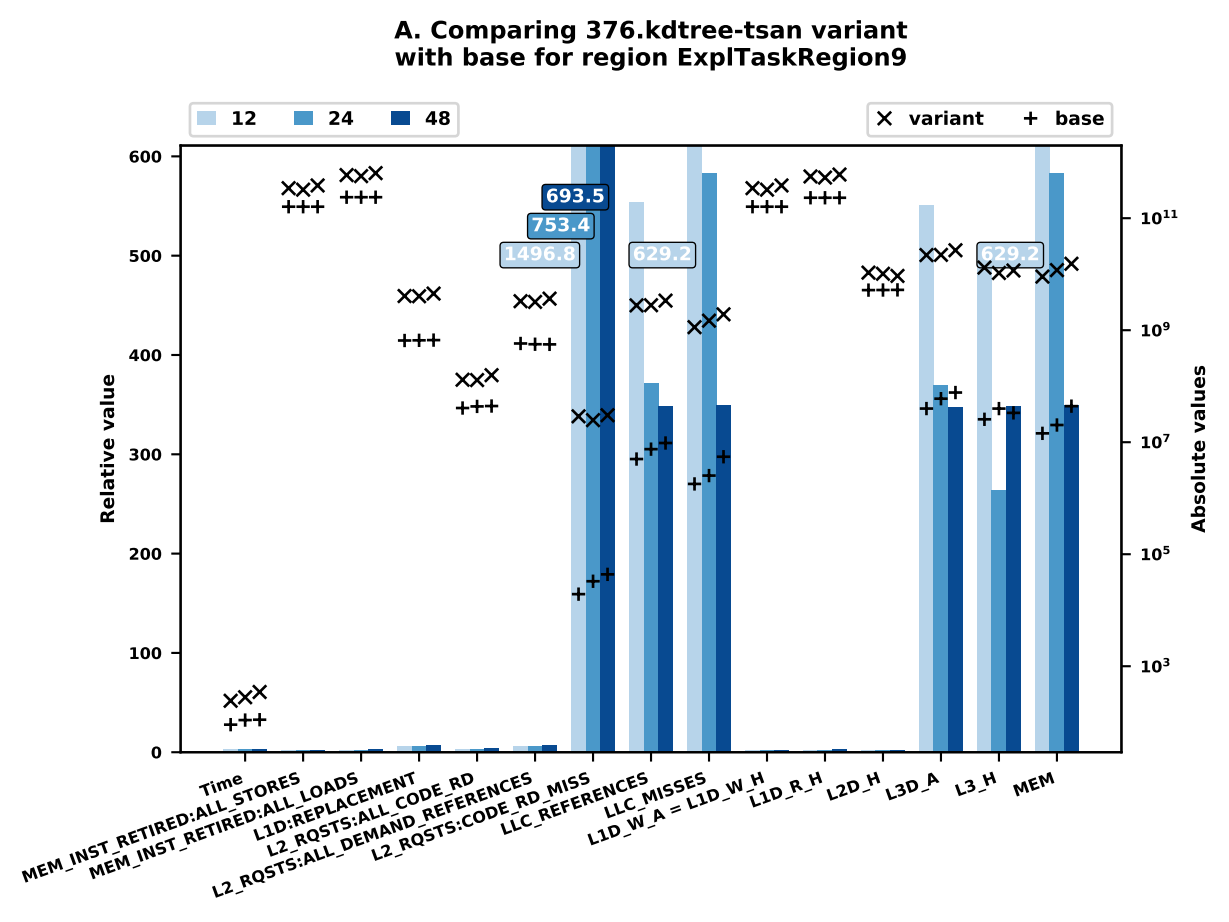

A. Comparing 376.kdtree-archer variant
with base for region ExplTaskRegion8
12
24
48
variant
base
Relative value
Absolute values
0
200
400
600
800
1000
10^3
10^5
10^7
10^9
10^{11}
1588.9
2240
1180.5
3838.5
1206.8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

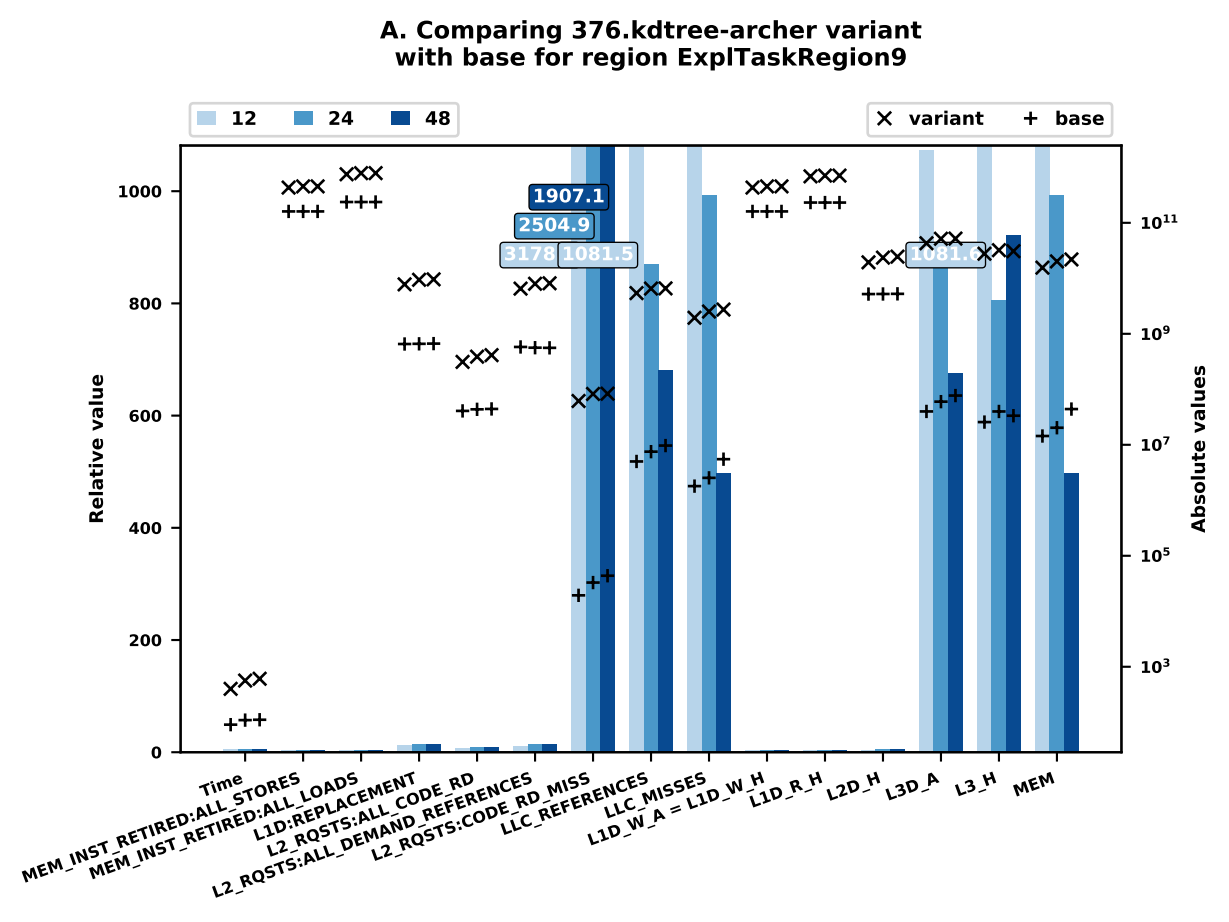

A. Comparing 376.kdtree-tsan-noread variant
with base for region ExplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
732.3
982.7
1492.8
906.0
906.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

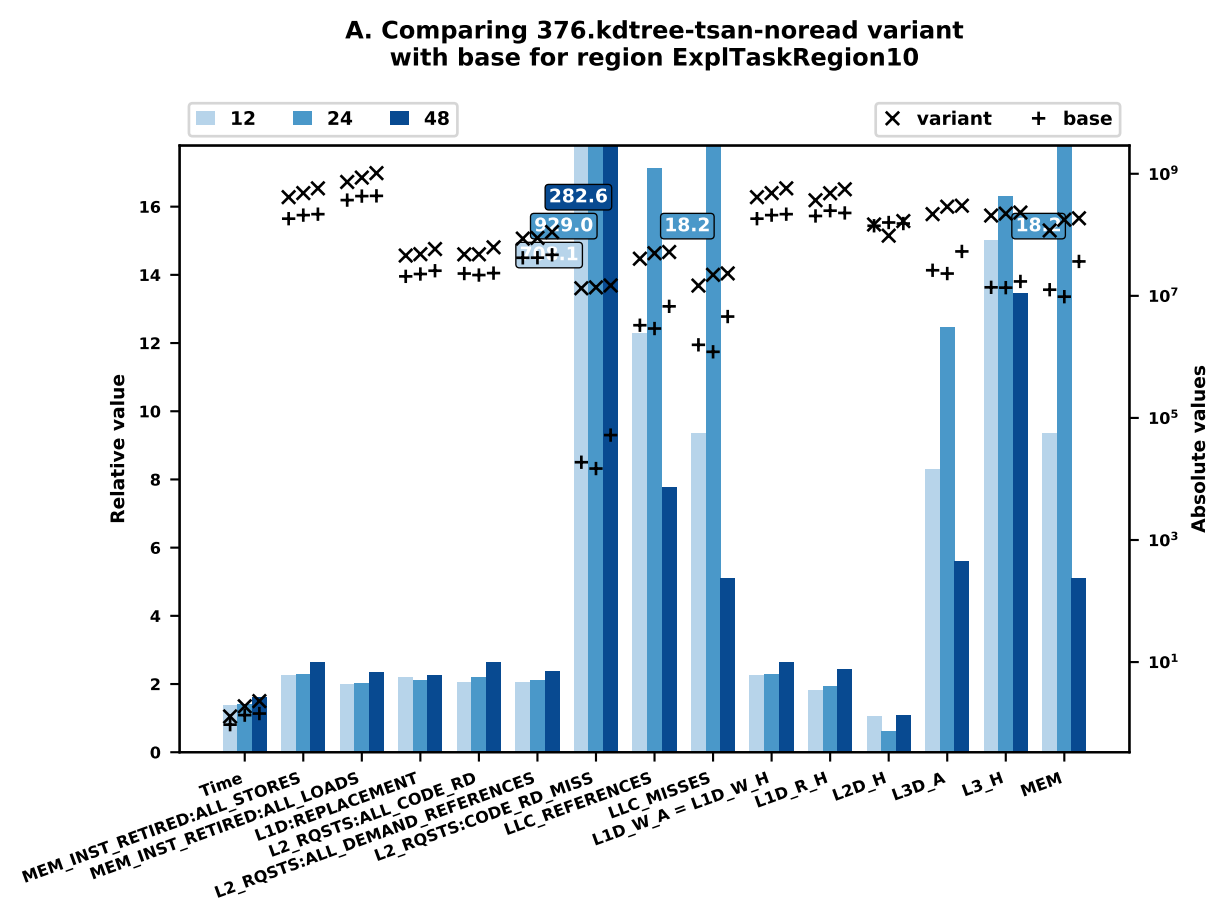

A. Comparing 376.kdtree-archer-noread variant
with base for region ExplTaskRegion9
12
24
48
variant
base
1878.9
2472.9
3350.7
1133.9
Relative value
Absolute values
0
200
400
600
800
1000
10^3
10^5
10^7
10^9
10^{11}
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

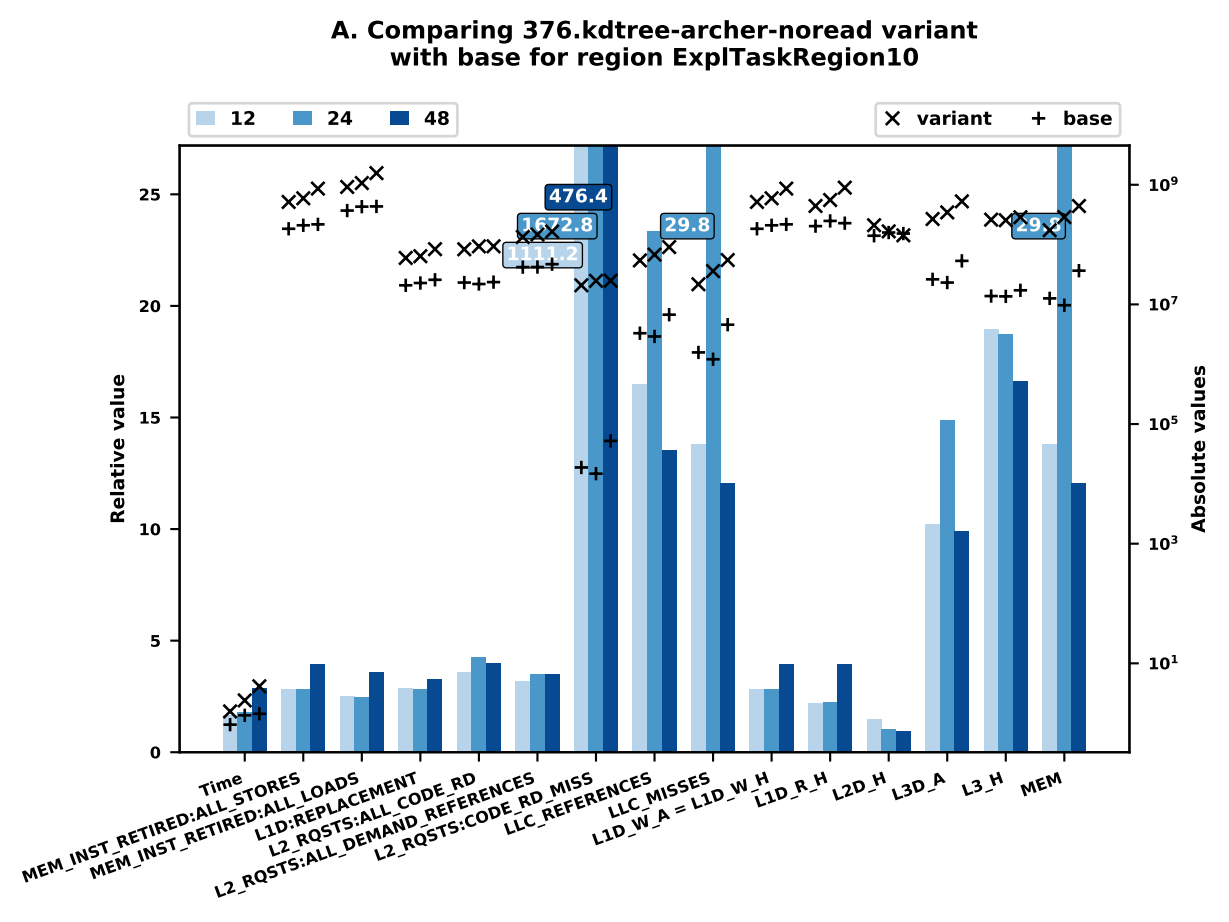

A. Comparing 376.kdtree-tsan-sampling variant
with base for region ExplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
631.5
890.2
1501.4
691.1
691.1
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

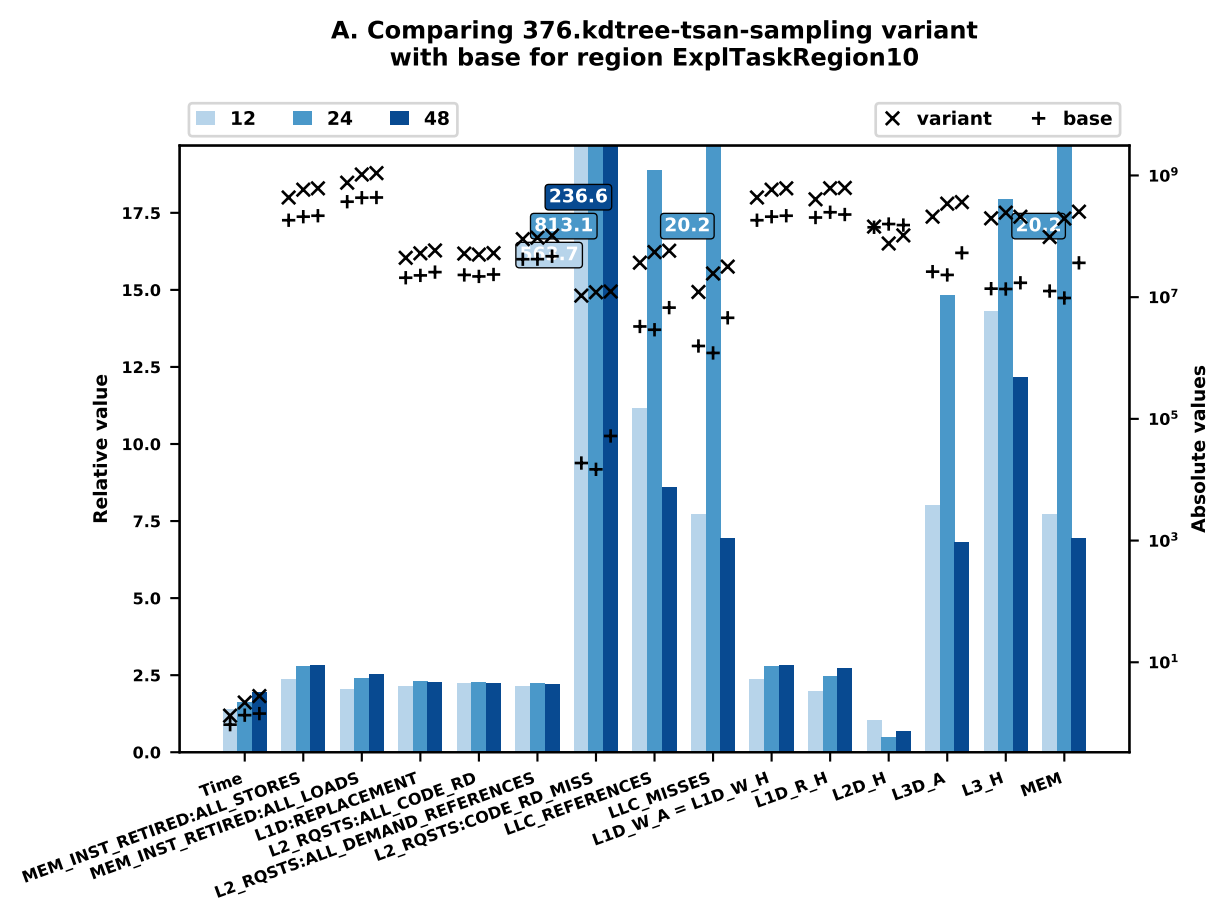

A. Comparing 376.kdtree-archer-sampling variant
with base for region ExplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
1781.4
2366.1
3346
1078.3
1179.5
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

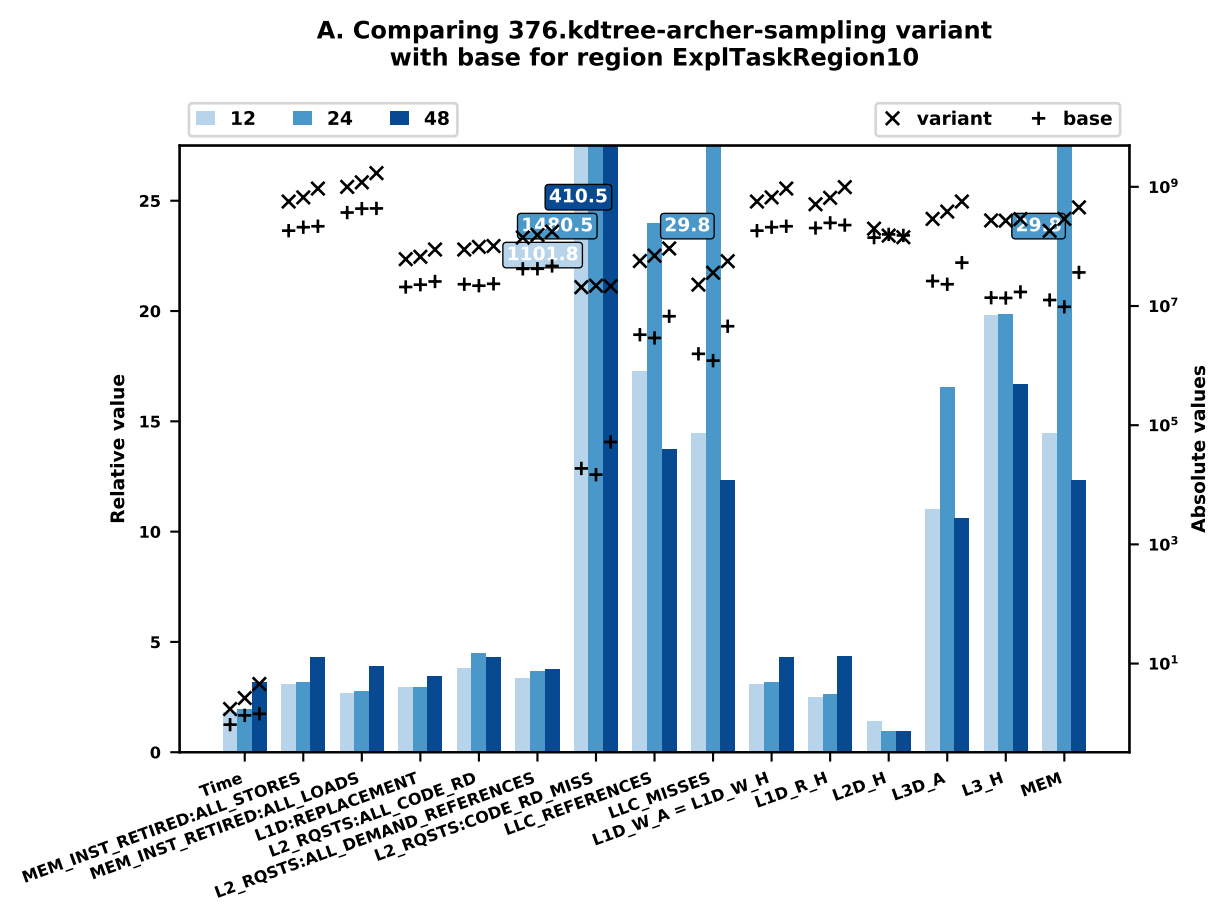

A. Comparing 376.kdtree-tsan variant
with base for region ExplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
693.5
753.4
1496.8
629.2
629.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

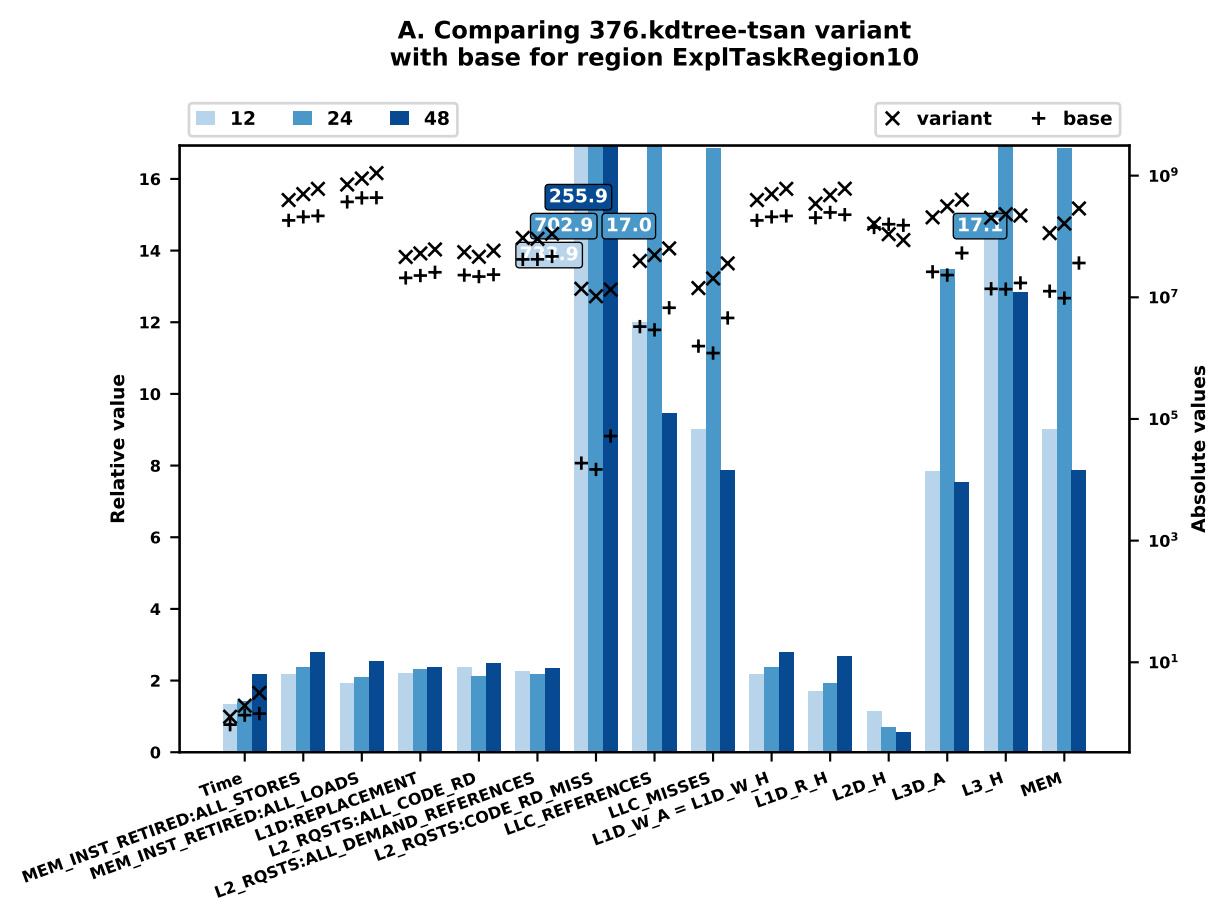

A. Comparing 376.kdtree-archer variant
with base for region ExplTaskRegion9
12
24
48
variant
base
Relative value
Absolute values
1907.1
2504.9
3178
1081.5
1081.5
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

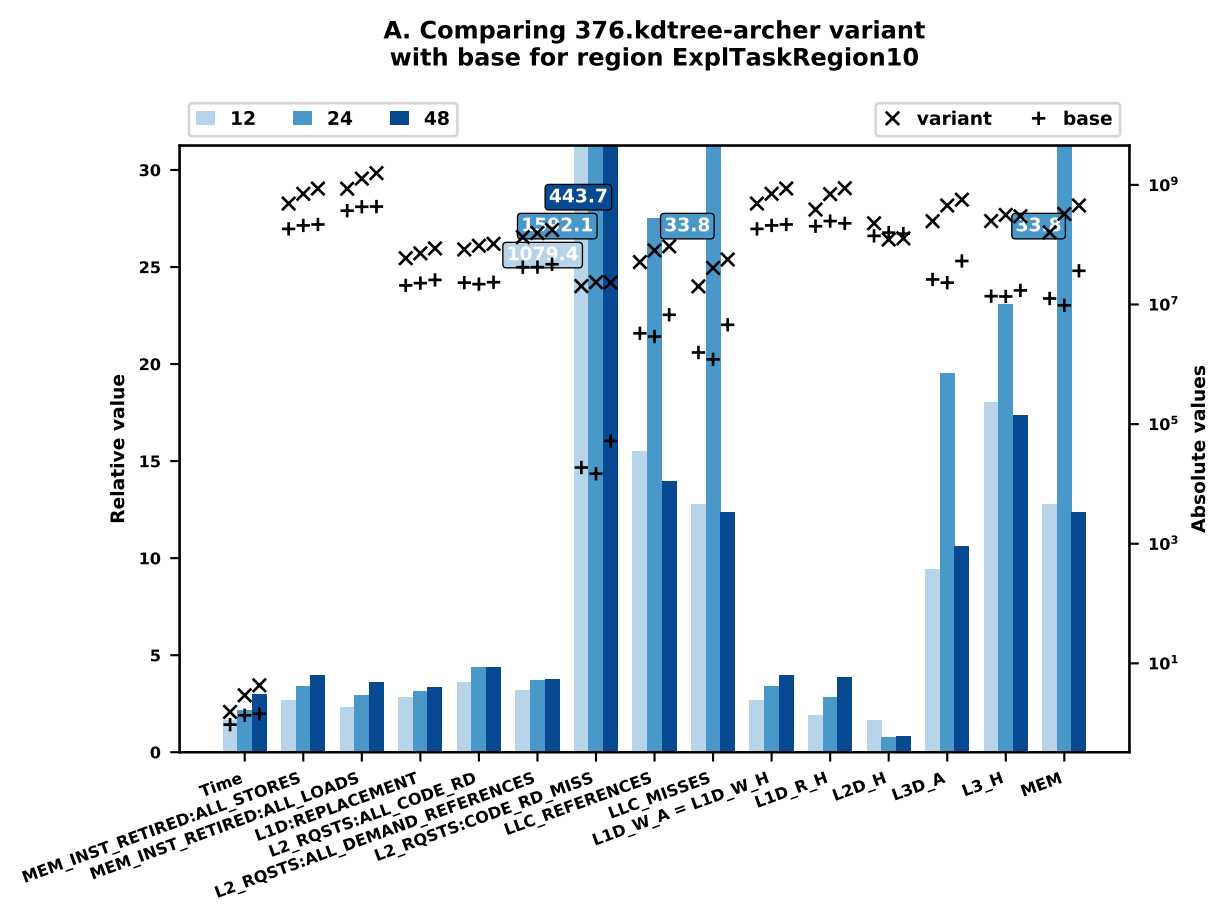

A. Comparing 376.kdtree-tsan-noread variant
with base for region ExplTaskRegion10
12
24
48
variant
base
Relative value
Absolute values
282.6
929.0
18.2
18.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

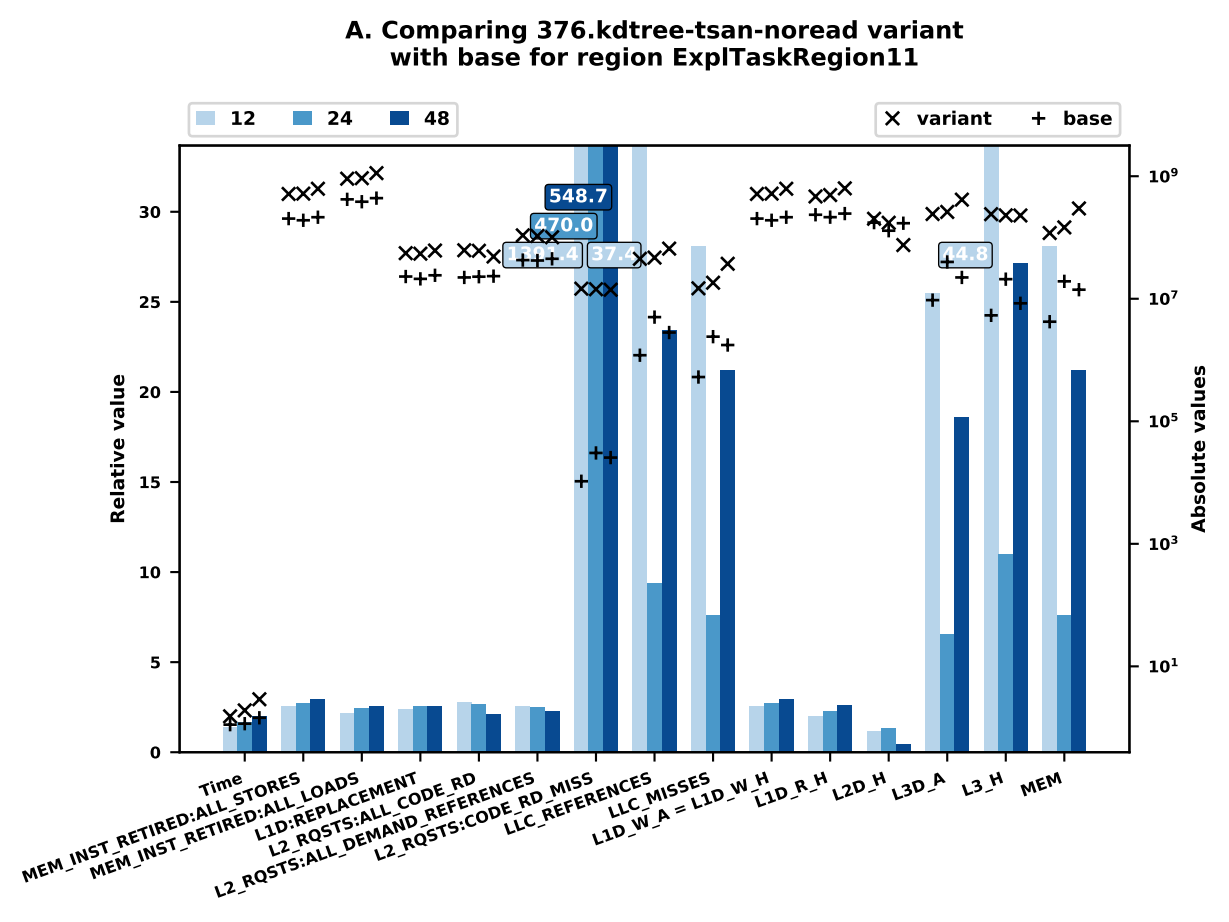

A. Comparing 376.kdtree-archer-noread variant
with base for region ExplTaskRegion10
12
24
48
variant
base
476.4
1672.8
1111.2
29.8
29.4
Relative value
Absolute values
0
5
10
15
20
25
10^1
10^3
10^5
10^7
10^9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

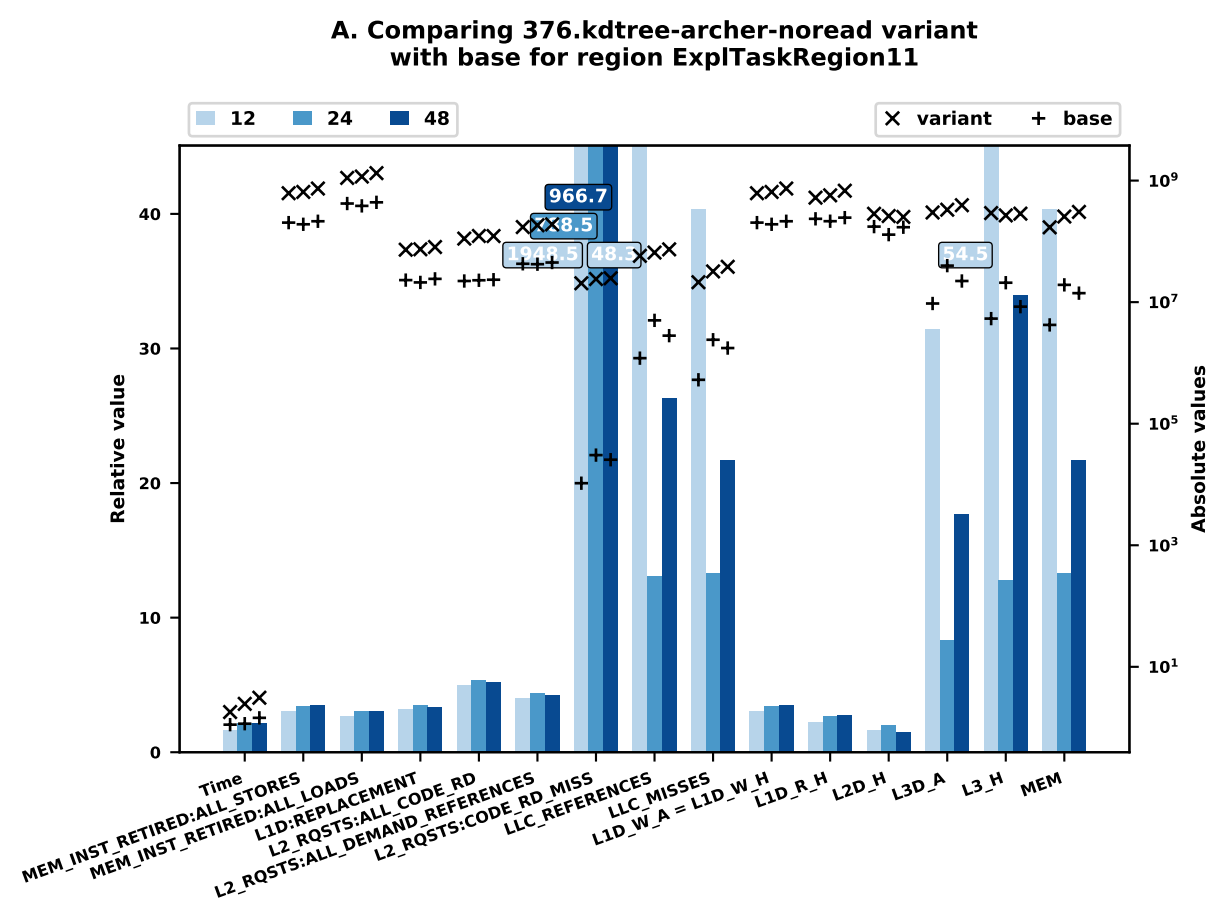

A. Comparing 376.kdtree-tsan-sampling variant
with base for region ExplTaskRegion10
12
24
48
variant
base
Relative value
Absolute values
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5
10^1
10^3
10^5
10^7
10^9
236.6
813.1
20.2
20.2
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

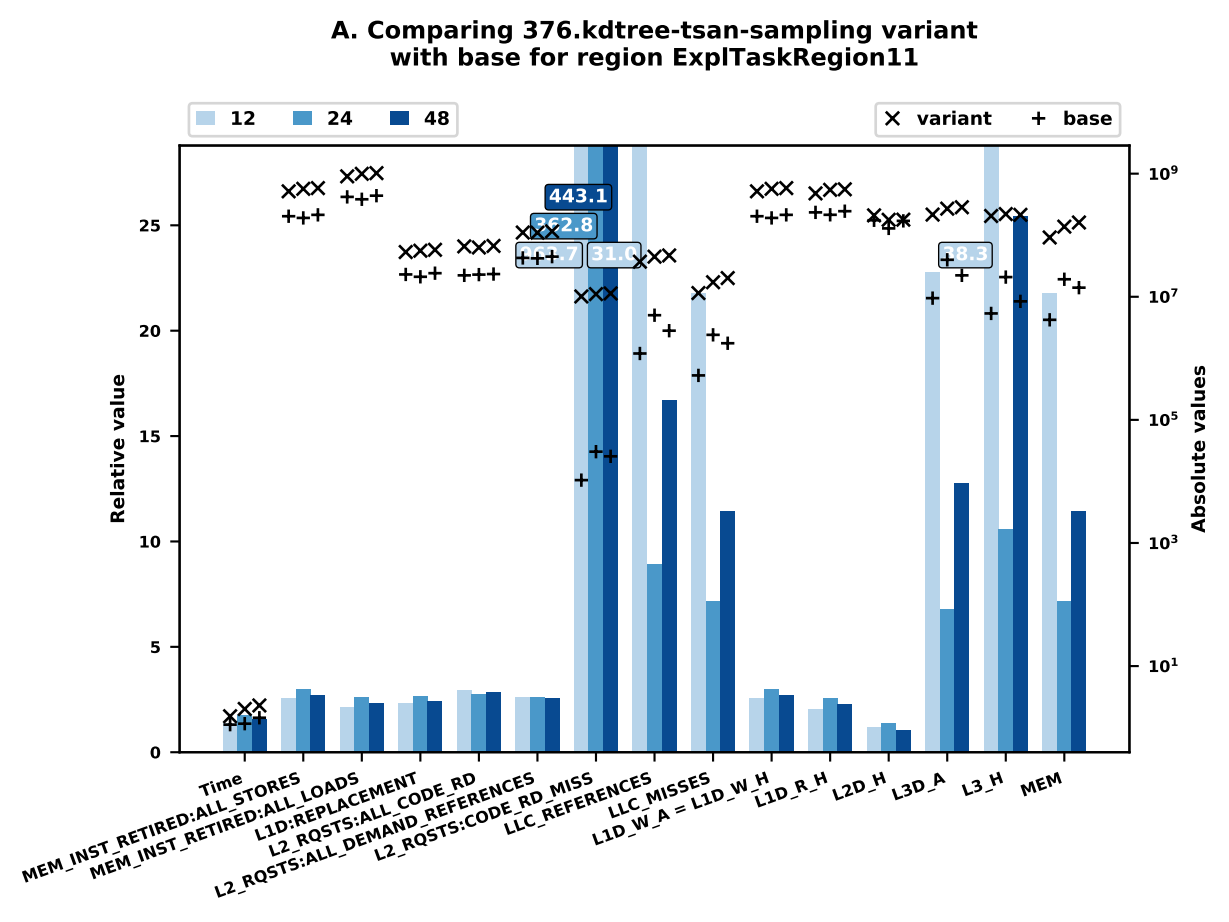

A. Comparing 376.kdtree-archer-sampling variant
with base for region ExplTaskRegion10
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
10^1
10^3
10^5
10^7
10^9
410.5
1480.5
1101.8
29.8
29.8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

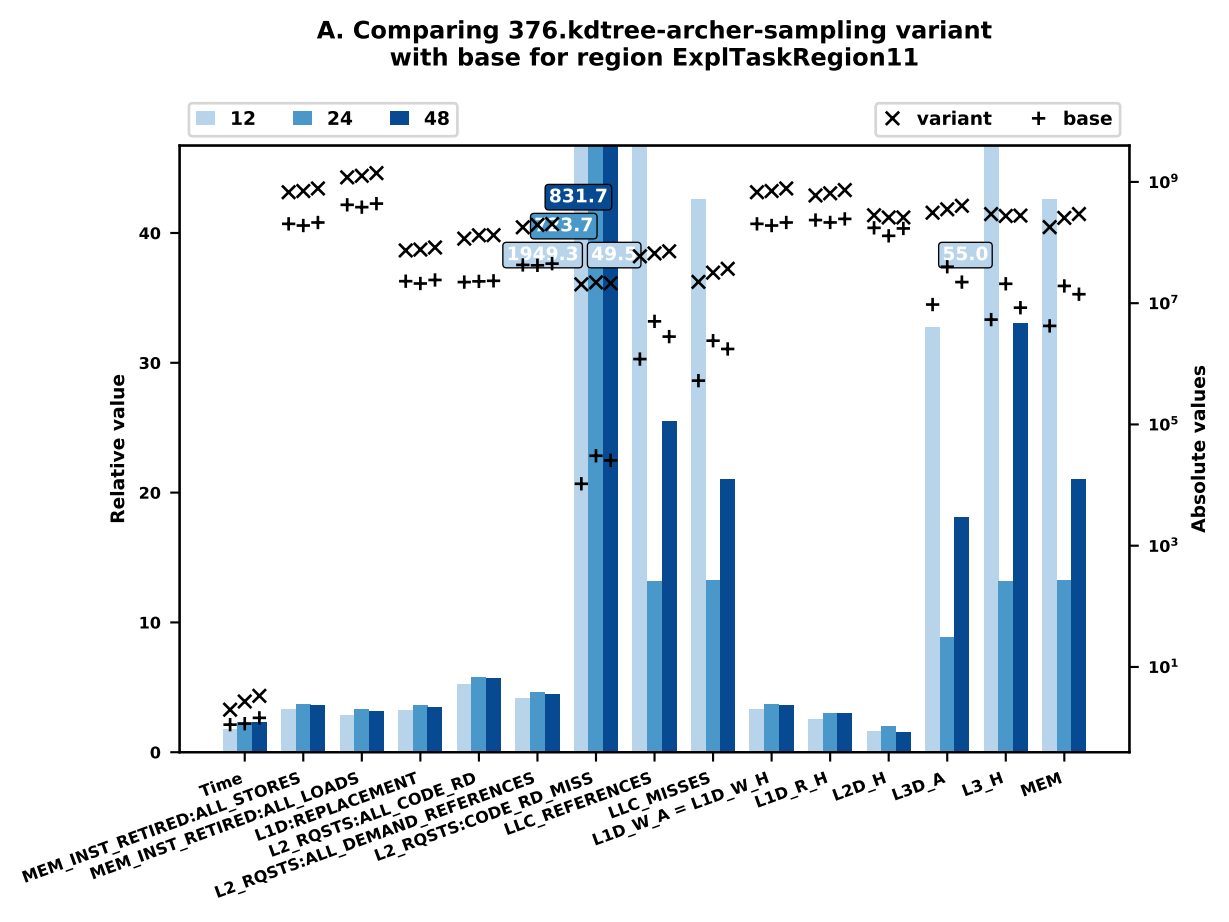

A. Comparing 376.kdtree-tsan variant
with base for region ExplTaskRegion10
12
24
48
variant
base
Relative value
Absolute values
255.9
702.9
17.0
17.1
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

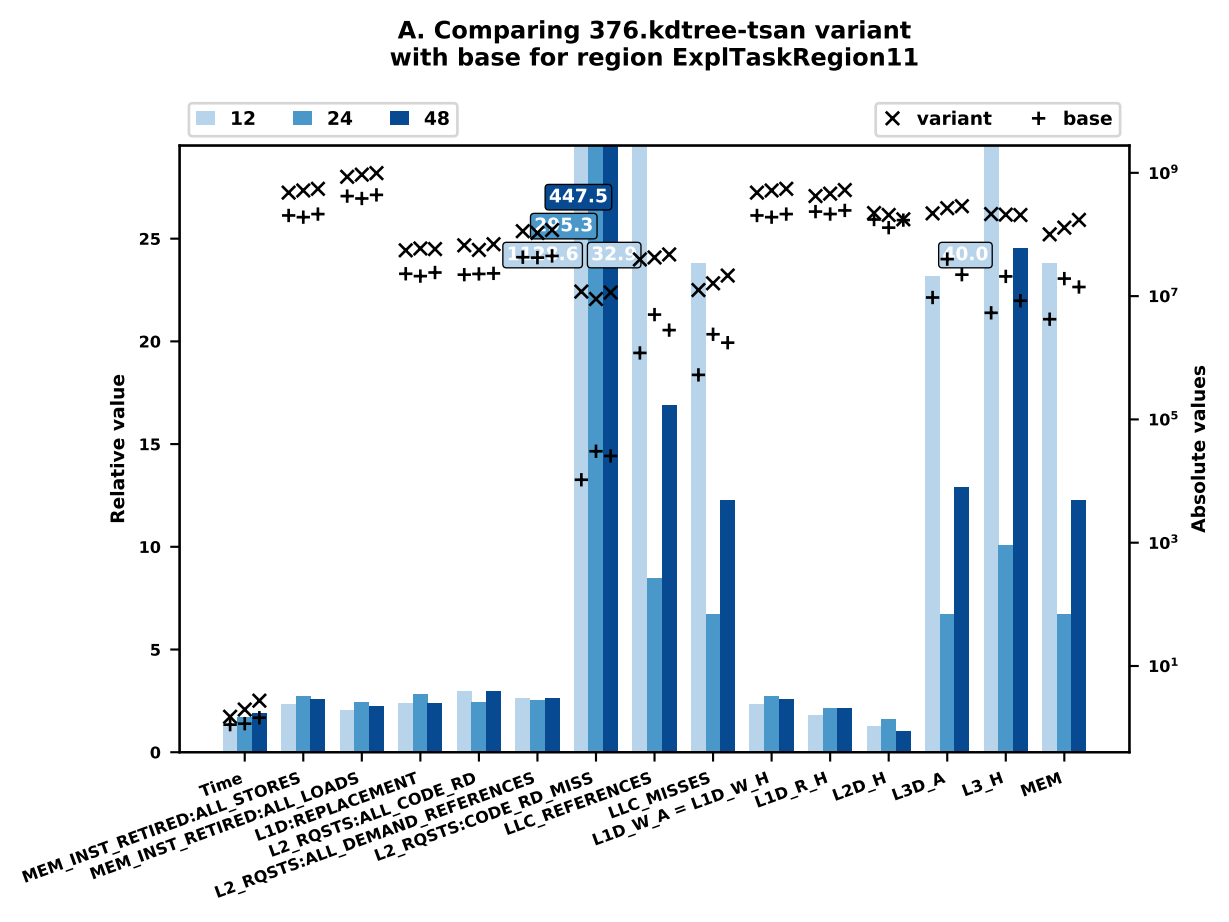

A. Comparing 376.kdtree-archer variant
with base for region ExplTaskRegion10
12
24
48
variant
base
Relative value
Absolute values
443.7
1502.1
1079.4
33.8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM

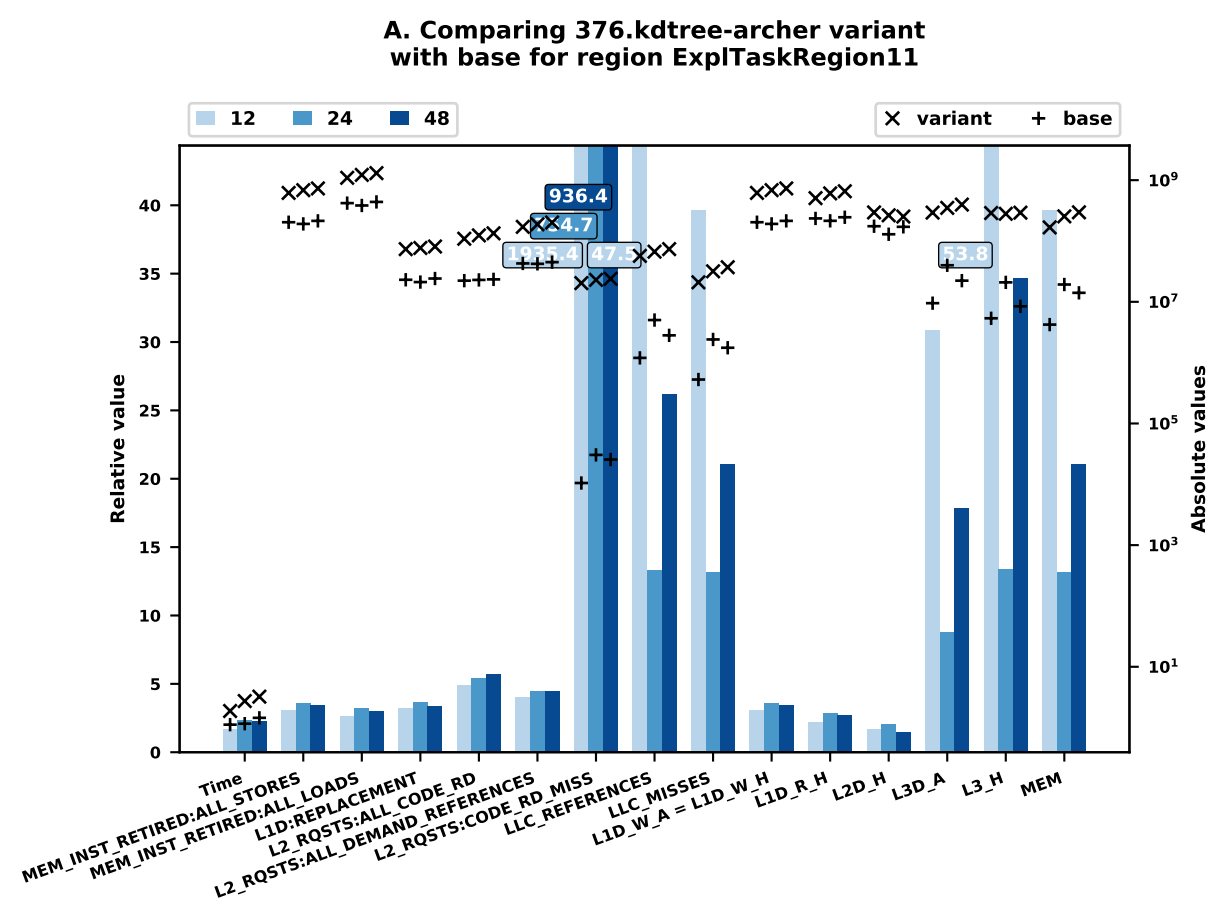

A. Comparing 376.kdtree-tsan-noread variant
with base for region ExplTaskRegion11
12
24
48
variant
base
548.7
470.0
37.4
14.8
Relative value
Absolute values
0
5
10
15
20
25
30
10^1
10^3
10^5
10^7
10^9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM


A. Comparing 376.kdtree-archer-noread variant
with base for region ExplTaskRegion11
12
24
48
variant
base
966.7
968.5
1048.5
48.3
24.5
Relative value
Absolute values
0
10
20
30
40
10^1
10^3
10^5
10^7
10^9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM


A. Comparing 376.kdtree-tsan-sampling variant
with base for region ExplTaskRegion11
12
24
48
variant
base
Relative value
Absolute values
0
5
10
15
20
25
10^1
10^3
10^5
10^7
10^9
443.1
262.8
31.0
28.3
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM


A. Comparing 376.kdtree-archer-sampling variant
with base for region ExplTaskRegion11
12
24
48
variant
base
Relative value
Absolute values
831.7
1040.3
49.5
25.0
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM


A. Comparing 376.kdtree-tsan variant
with base for region ExplTaskRegion11
12
24
48
variant
base
Relative value
Absolute values
447.5
205.3
32.5
40.0
0
5
10
15
20
25
10^1
10^3
10^5
10^7
10^9
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM


A. Comparing 376.kdtree-archer variant
with base for region ExplTaskRegion11
12
24
48
variant
base
Relative value
Absolute values
936.4
1935.4
47.5
53.8
Time
MEM_INST_RETIRED:ALL_STORES
MEM_INST_RETIRED:ALL_LOADS
L1D:REPLACEMENT
L2_RQSTS:ALL_CODE_RD
L2_RQSTS:ALL_DEMAND_REFERENCES
L2_RQSTS:CODE_RD_MISS
LLC_REFERENCES
LLC_MISSES
L1D_W_A = L1D_W_H
L1D_R_H
L2D_H
L3D_A
L3_H
MEM