```
Wsg: (without fence but ..optimazation" of fence)
                                                                       Wsg: (with fence in take() and ..optimized" fence)
process1(){
                                                                       process1(){
                                                                               push(555):
              push(555);
              take(tvalue2):
                                                                              take(tvalue2);
              push(777);
                                                                              push(777);
              push (999);
                                                                              push(999);
process2(){
                                                                       process2(){
       steal(svalue);
                                                                               steal(svalue);
       steal(s2);
                                                                              steal(s2);
}
State-vector 872 byte, depth reached 1289, errors: 0
                                                                       State-vector 872 byte, depth reached 1295, errors: 0
12135124 states, stored
                                                                        11622923 states, stored
17005682 states, matched
                                                                        16268415 states, matched
29140806 transitions (= stored+matched)
                                                                        27891338 transitions (= stored+matched)
1.5739614e+08 atomic steps
                                                                       1.4888045e+08 atomic steps
hash conflicts: 3187150 (resolved)
                                                                       hash conflicts: 3015024 (resolved)
Stats on memory usage (in Megabytes):
                                                                       Stats on memory usage (in Megabytes):
              equivalent memory usage for states (stored*(State-vector +
                                                                        9976.035
                                                                                     equivalent memory usage for states (stored*(State-vector +
10415 660
overhead))
                                                                       overhead))
 499.577
              actual memory usage for states (compression: 4.80%)
                                                                         477.213
                                                                                     actual memory usage for states (compression: 4.78%)
       state-vector as stored = 15 byte + 28 byte overhead
                                                                               state-vector as stored = 15 byte + 28 byte overhead
              memory used for hash table (-w24)
                                                                                     memory used for hash table (-w24)
 128.000
                                                                         128.000
  0.534
              memory used for DFS stack (-m10000)
                                                                         0.534
                                                                                     memory used for DFS stack (-m10000)
 627.948
              total actual memory usage
                                                                         605.585
                                                                                     total actual memory usage
nr of templates: [0:globals 1:chans 2:procs]
                                                                       nr of templates: [0:globals 1:chans 2:procs]
collapse counts: [ 0:40259 2:19321 3:767 4:3696 5:12 ]
                                                                       collapse counts: [ 0:39863 2:17929 3:773 4:3696 5:12 ]
pan: elapsed time 128 seconds
                                                                       pan: elapsed time 127 seconds
No errors found -- did you verify all claims?
                                                                       No errors found -- did you verify all claims?
```

```
Wsg: (with fence in take() but no optimazation)
                                                                       Wsg: (with fence in take() and ..optimized" fence)
process1(){
                                                                       process1(){
                                                                               push(555):
              push (555);
              take(tvalue2):
                                                                              take(tvalue2);
              push(777);
                                                                              push(777);
              push (999);
                                                                              push(999);
process2(){
                                                                       process2(){
       steal(svalue);
                                                                               steal(svalue);
       steal(s2);
                                                                              steal(s2);
}
State-vector 872 byte, depth reached 1297, errors: 0
                                                                       State-vector 872 byte, depth reached 1295, errors: 0
11599264 states, stored
                                                                        11622923 states, stored
16241436 states, matched
                                                                        16268415 states, matched
27840700 transitions (= stored+matched)
                                                                        27891338 transitions (= stored+matched)
1.4931478e+08 atomic steps
                                                                       1.4888045e+08 atomic steps
hash conflicts: 2944313 (resolved)
                                                                       hash conflicts: 3015024 (resolved)
Stats on memory usage (in Megabytes):
                                                                       Stats on memory usage (in Megabytes):
              equivalent memory usage for states (stored*(State-vector +
                                                                        9976.035
                                                                                     equivalent memory usage for states (stored*(State-vector +
9955 728
overhead))
                                                                       overhead))
 476.234
              actual memory usage for states (compression: 4.78%)
                                                                         477.213
                                                                                     actual memory usage for states (compression: 4.78%)
       state-vector as stored = 15 byte + 28 byte overhead
                                                                               state-vector as stored = 15 byte + 28 byte overhead
              memory used for hash table (-w24)
                                                                                     memory used for hash table (-w24)
 128.000
                                                                         128.000
  0.534
              memory used for DFS stack (-m10000)
                                                                         0.534
                                                                                     memory used for DFS stack (-m10000)
              total actual memory usage
                                                                         605.585
                                                                                     total actual memory usage
 604.608
nr of templates: [0:globals 1:chans 2:procs]
                                                                       nr of templates: [0:globals 1:chans 2:procs]
collapse counts: [ 0:39756 2:17924 3:767 4:3561 5:12 ]
                                                                       collapse counts: [ 0:39863 2:17929 3:773 4:3696 5:12 ]
pan: elapsed time 118 seconds
                                                                       pan: elapsed time 127 seconds
No errors found -- did you verify all claims?
                                                                       No errors found -- did you verify all claims?
```

```
Wsg: (without fence but ..optimazation" of fence)
                                                                       Wsq: (without fence in take() and no optimazation)
process1(){
                                                                       process1(){
              push (555);
                                                                                      push(555);
              take(tvalue2):
                                                                                     take(tvalue2):
              push(777);
                                                                                     push(777);
              push (999);
                                                                                     push(999);
process2(){
                                                                       process2(){
       steal(svalue);
                                                                              steal(svalue);
       steal(s2);
                                                                              steal(s2);
                                                                        }
}
State-vector 872 byte, depth reached 1289, errors: 0
                                                                       State-vector 872 byte, depth reached 1293, errors: 0
12135124 states, stored
                                                                        12110799 states, stored
17005682 states, matched
                                                                        16977899 states, matched
29140806 transitions (= stored+matched)
                                                                        29088698 transitions (= stored+matched)
1.5739614e+08 atomic steps
                                                                       1.5791698e+08 atomic steps
                                                                       hash conflicts: 3181039 (resolved)
hash conflicts: 3187150 (resolved)
Stats on memory usage (in Megabytes):
                                                                       Stats on memory usage (in Megabytes):
                                                                                     equivalent memory usage for states (stored*(State-vector +
              equivalent memory usage for states (stored*(State-vector + 10394.782)
10415 660
overhead))
                                                                       overhead))
 499.577
              actual memory usage for states (compression: 4.80%)
                                                                         498.504
                                                                                     actual memory usage for states (compression: 4.80%)
       state-vector as stored = 15 byte + 28 byte overhead
                                                                              state-vector as stored = 15 byte + 28 byte overhead
              memory used for hash table (-w24)
                                                                                     memory used for hash table (-w24)
 128.000
                                                                         128.000
  0.534
              memory used for DFS stack (-m10000)
                                                                         0.534
                                                                                     memory used for DFS stack (-m10000)
 627.948
              total actual memory usage
                                                                         626.874
                                                                                     total actual memory usage
nr of templates: [0:globals 1:chans 2:procs]
                                                                       nr of templates: [0:globals 1:chans 2:procs]
collapse counts: [ 0:40259 2:19321 3:767 4:3696 5:12 ]
                                                                       collapse counts: [0:40154 2:19316 3:764 4:3561 5:12]
pan: elapsed time 128 seconds
                                                                       pan: elapsed time 139 seconds
No errors found -- did you verify all claims?
                                                                       No errors found -- did you verify all claims?
```

```
Wsg: no opimization with fence
                                                                       Wsg: With optimization with fence
process1(){
                                                                       process1(){
                                                                              push(555):
       push(555);
       mfence();
                                                                              mfence():
       push(777);
                                                                              push(777);
       push (999);
                                                                              push(999);
       take(tvalue1);
                                                                              take(tvalue1);
                                                                       process2() {
process2() {
       steal();
                                                                               steal():
State-vector 912 byte, depth reached 2219, errors: 0
                                                                       State-vector 912 byte, depth reached 2225, errors: 0
 3080207 states, stored
                                                                         2983823 states, stored
 4217328 states, matched
                                                                         4070196 states, matched
 7297535 transitions (= stored+matched)
                                                                         7054019 transitions (= stored+matched)
45887468 atomic steps
                                                                        43871332 atomic steps
hash conflicts: 182947 (resolved)
                                                                       hash conflicts: 168812 (resolved)
Stats on memory usage (in Megabytes):
                                                                       Stats on memory usage (in Megabytes):
2761.263
              equivalent memory usage for states (stored*(State-vector +
                                                                        2674.860
                                                                                      equivalent memory usage for states (stored*(State-vector +
overhead))
                                                                       overhead))
 131.253
              actual memory usage for states (compression: 4.75%)
                                                                         127.735
                                                                                     actual memory usage for states (compression: 4.78%)
       state-vector as stored = 17 byte + 28 byte overhead
                                                                              state-vector as stored = 17 byte + 28 byte overhead
 128.000
              memory used for hash table (-w24)
                                                                         128.000
                                                                                     memory used for hash table (-w24)
  0.534
              memory used for DFS stack (-m10000)
                                                                         0.534
                                                                                     memory used for DFS stack (-m10000)
                                                                                     total actual memory usage
 259.687
              total actual memory usage
                                                                         256.171
nr of templates: [0:globals 1:chans 2:procs]
collapse counts: [0:21760 2:11132 3:1040 4:813 6:12]
                                                                       nr of templates: [0:globals 1:chans 2:procs]
                                                                       collapse counts: [0:22102 2:11083 3:1052 4:837 6:12]
pan: elapsed time 36 seconds
No errors found -- did you verify all claims?
                                                                       pan: elapsed time 32.3 seconds
                                                                       No errors found -- did you verify all claims?
```

```
Wsg: no optimization
                                                                        Wsg: with optimization
process1(){
                                                                        process1(){
       short tvalue1:
                                                                               short tvalue1:
       push(555);
                                                                               push(555);
       take(tvalue1);
                                                                               take(tvalue1);
}
                                                                        }
                                                                        State-vector 512 byte, depth reached 377, errors: 0
State-vector 512 byte, depth reached 375, errors: 0
                                                                            347 states, stored
   346 states, stored
                                                                           139 states, matched
   139 states, matched
                                                                           486 transitions (= stored+matched)
   485 transitions (= stored+matched)
                                                                           2374 atomic steps
  2374 atomic steps
                                                                        hash conflicts:
                                                                                           0 (resolved)
hash conflicts:
                   0 (resolved)
                                                                        Stats on memory usage (in Megabytes):
Stats on memory usage (in Megabytes):
                                                                          0.179
                                                                                      equivalent memory usage for states (stored*(State-vector +
              equivalent memory usage for states (stored*(State-vector +
  0.178
                                                                        overhead))
overhead))
                                                                          0.196
                                                                                      actual memory usage for states
  0.196
              actual memory usage for states
                                                                         128.000
                                                                                      memory used for hash table (-w24)
 128.000
              memory used for hash table (-w24)
                                                                          0.534
                                                                                      memory used for DFS stack (-m10000)
  0.534
              memory used for DFS stack (-m10000)
                                                                         128.730
                                                                                      total actual memory usage
 128.730
              total actual memory usage
                                                                        nr of templates: [0:globals 1:chans 2:procs]
nr of templates: [0:globals 1:chans 2:procs]
                                                                        collapse counts: [0:26 2:221 3:58 4:12]
collapse counts: [0:26 2:220 3:56 4:12]
                                                                        pan: elapsed time 0.01 seconds
pan: elapsed time 0.01 seconds
                                                                        No errors found -- did you verify all claims?
No errors found -- did you verify all claims?
```