Executime Time (ms) using Hybrid PThread/OpenMP (4 PThreads) 0.9 0.8 0.7 crosspoint of oversubscription of total threads 0.6 0.5 crosspoint of oversubscription of total cores 0.4 0.2 0.1 10 11 12 22 23 25 29 30 31 32 27 28 Number of OpenMP Threads per PThreads (total 4 PThreads) 0.017 0.022 0.031 0.038 0.043 0.048 0.058 0.067 0.073 0.077 0.084 0.092 0.107 0.108 0.127 0.128 0.187 0.313 0.70 3.71 10.8 15.2 16.5 20.1 21.1 20.7 20.1 24.0 23.2 23.5 23.5 24.1 24.5 35.6 29.8 SPIN_PAUSE 0.016 0.022 0.026 0.031 0.044 0.049 0.055 0.061 0.073 0.077 0.082 0.097 0.106 0.116 0.136 0.132 0.155 0.248 0.289 0.341 0.336 0.354 0.347 0.429 0.425 0.452 0.509 0.543 0.609 0.605 0.642 0.731 0.762 0.957 0.856 SPIN YIELD $0.018 \ | \ 0.027 \ | \ 0.038 \ | \ 0.046 \ | \ 0.058 \ | \ 0.065 \ | \ 0.065 \ | \ 0.075 \ | \ 0.083 \ | \ 0.098 \ | \ 0.106 \ | \ 0.12 \ | \ 0.127 \ | \ 0.139 \ | \ 0.152 \ | \ 0.167 \ | \ 0.184 \ | \ 0.202 \ | \ 0.217 \ | \ 0.235 \ | \ 0.254 \ | \ 0.302 \ | \ 0.303 \ | \ 0.389 \ | \ 0.417 \ | \ 0.374 \ | \ 0.422 \ | \ 0.441 \ | \ 0.49 \ | \ 0.517 \ | \ 0.575 \ | \ 0.593 \ | \ 0.586 \ | \ 0.613 \ | \ 0.68 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788 \ | \ 0.788$ SUSPEND 0.031 | 0.037 | 0.044 | 0.054 | 0.064 | 0.064 | 0.064 | 0.064 | 0.078 | 0.091 | 0.11 | 0.122 | 0.16 | 0.165 | 0.174 | 0.211 | 0.231 | 0.231 | 0.248 | 0.282 | 0.307 | 0.346 | 0.381 | 0.451 | 0.487 | 0.524 | 0.567 | 0.626 | 0.697 | 0.749 | 0.774 | 0.842 | 0.95 | 1.002 | 1.035 | 1.096 | 1.178 | 1.219 | 1.374