HDDM i/o library with multi-threaded extensions

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[jonesrt@gluey work1]\$./t_rest usage: t_rest [options] <input_hddm_file> where options may include any of the following: -n <count> : stop after reading <count> events from the input hddm file, default is the entire file -p <count> : use <count> i/o threads in multi-thread tests, default is 4 -h, --help : display this help message

[jonesrt@gluey work1]\$./t_rest -n 2200 -p 4 rest.hddm test 0: copying records from input file test 1: reading single-threaded from input file, bz2 compression 2200 events read in 0.456055 seconds, 4823.981445 ev/s, 21.314804 MB/s test 2: reading single-threaded from input file, zlib compression 2200 events read in 0.124282 seconds, 17701.640625 ev/s, 78.214856 MB/s test 3: reading single-threaded from input file, no compression 2200 events read in 0.087073 seconds, 25266.078125 ev/s, 111.638216 MB/s

test 4: writing single-threaded to output file, bz2 compression 2200 events written in 0.763578 seconds, 2881.171875 ev/s, 12.730463 MB/s test 5: writing single-threaded to output file, zlib compression 2200 events written in 0.447970 seconds, 4911.045410 ev/s, 21.699464 MB/s test 6: writing single-threaded to output file, no compression 2200 events written in 0.043535 seconds, 50534.128906 ev/s, 223.285136 MB/s test 7: reading multi-threaded from input file, bz2 compression 2200 events read in 0.262175 seconds, 8391.349609 ev/s, 37.077244 MB/s test 8: reading multi-threaded from input file, zlib compression 2200 events read in 0.040803 seconds, 53917.683594 ev/s, 238.235664 MB/s test 9: reading multi-threaded from input file, no compression 2200 events read in 0.032588 seconds, 67509.273438 ev/s, 298.289824 MB/s

test 10: writing multi-threaded to output file, bz2 compression

2200 events written in 0.134516 seconds, 16354.916992 ev/s, 72.264232 MB/s test 11: writing multi-threaded to output file, zlib compression

2200 events written in 0.066648 seconds, 33009.460938 ev/s, 145.852368 MB/s test 12: writing multi-threaded to output file, no compression

2200 events written in -0.038219 seconds, -57563.289062 ev/s, -254.343488 MB/s

test 13: reading from multi-threaded output file, bz2 compression

2200 events read in 0.281185 seconds, 7824.026367 ev/s, 34.570528 MB/s

test 14: reading from multi-threaded output file, zlib compression

2200 events read in 0.041278 seconds, 53296.929688 ev/s, 235.492944 MB/s

test 15: reading from multi-threaded output file, no compression 2200 events read in 0.037177 seconds, 59176.554688 ev/s, 261.471728 MB/s

test 16: single-threaded random access reads, bz2 compression event 1000

event 2000

2200 events read in 65.919022 seconds, 33.374283 ev/s, 0.147464 MB/s

test 17: single-threaded random access reads, z compression

event 1000

event 2000

2200 events read in 0.336643 seconds, 6535.111328 ev/s, 28.875402 MB/s

test 18: single-threaded random access reads, no compression

event 1000

event 2000

2200 events read in 0.099034 seconds, 22214.589844 ev/s, 98.155208 MB/s

test 19: multi-threaded random access reads, bz2 compression 8800 events read in 80.756683 seconds, 108.969307 ev/s, 0.481481 MB/s test 20: multi-threaded random access reads, z compression 8800 events read in 0.375393 seconds, 23442.083984 ev/s, 103.578888 MB/s test 21: multi-threaded random access reads, no compression 8800 events read in 0.118774 seconds, 74090.445312 ev/s, 327.368768 MB/s test 22: multi-threaded random access reads, mt-bz2 compression 8800 events read in 79.041199 seconds, 111.334343 ev/s, 0.491931 MB/s test 23: multi-threaded random access reads, mt-z compression 8800 events read in 0.375812 seconds, 23415.962891 ev/s, 103.463480 MB/s test 24: multi-threaded random access reads, mt-no compression 8800 events read in 0.117554 seconds, 74859.421875 ev/s, 330.766496 MB/s