**20150529-WingM5\_3\_10variable\_group-Result**

Starting matlabpool using the 'local' configuration ... connected to 8 labs.

Best Mean Stall

Generation f-count f(x) f(x) Generations

1 200 4811 7173 0

2 300 4301 7144 0

3 400 4301 7561 1

4 500 4000 7639 0

5 600 4000 6749 0

6 700 4000 6325 1

7 800 4000 6450 0

8 900 4000 6096 1

9 1000 4000 6054 2

10 1100 4000 6140 0

11 1200 4000 6122 0

12 1300 3999 6394 0

13 1400 3999 6489 0

14 1500 3997 6160 0

15 1600 3997 6122 0

16 1700 3997 5989 1

17 1800 3997 6113 2

18 1900 3997 6117 3

19 2000 3997 5999 4

20 2100 3995 5899 0

21 2200 3995 5887 1

22 2300 3995 5846 2

23 2400 3994 5900 0

24 2500 3990 6033 0

25 2600 3990 5812 0

26 2700 3990 5424 1

27 2800 3976 5906 0

28 2900 3976 5680 1

29 3000 3976 5274 2

30 3100 3976 5550 3

31 3200 3970 5353 0

32 3300 3968 5138 0

33 3400 3968 5546 1

34 3500 3968 5437 0

35 3600 3967 5262 0

36 3700 3965 5367 0

37 3800 3965 5276 1

38 3900 3965 4957 2

39 4000 3945 5172 0

40 4100 3945 5072 1

41 4200 3945 5242 2

42 4300 3945 5125 3

43 4400 3935 4901 0

44 4500 3935 4890 1

45 4600 3932 5045 0

46 4700 3923 5065 0

47 4800 3923 5064 1

48 4900 3923 4878 2

49 5000 3923 4810 3

50 5100 3916 4775 0

51 5200 3916 4849 1

52 5300 3916 5169 2

53 5400 3914 5057 0

54 5500 3911 4894 0

55 5600 3910 5027 0

56 5700 3910 4875 1

57 5800 3908 4798 0

58 5900 3908 4909 1

59 6000 3908 4736 2

60 6100 3904 4691 0

61 6200 3903 4652 0

62 6300 3903 4645 1

63 6400 3894 4589 0

64 6500 3894 4685 0

65 6600 3894 4622 1

66 6700 3894 4591 2

67 6800 3894 4469 3

68 6900 3894 4516 4

69 7000 3894 4506 0

70 7100 3888 4367 0

71 7200 3884 4369 0

72 7300 3884 4390 1

73 7400 3884 4405 2

74 7500 3884 4321 3

75 7600 3883 4229 0

76 7700 3876 4299 0

77 7800 3876 4195 0

78 7900 3876 4183 0

79 8000 3876 4202 0

80 8100 3873 4211 0

81 8200 3873 4168 1

82 8300 3862 4144 0

83 8400 3862 4161 1

84 8500 3861 4146 0

85 8600 3857 4160 0

86 8700 3857 4120 1

87 8800 3856 4122 0

88 8900 3854 4123 0

89 9000 3854 4098 1

90 9100 3853 4012 0

91 9200 3852 4007 0

92 9300 3852 3981 1

93 9400 3846 3950 0

94 9500 3846 3930 1

95 9600 3845 3938 0

96 9700 3844 3911 0

97 9800 3844 3883 0

98 9900 3843 3869 0

99 10000 3842 3861 0

100 10100 3841 3852 0

Optimization terminated: maximum number of generations exceeded.

Switching to the hybrid optimization algorithm (FMINSEARCH).

Iteration Func-count min f(x) Procedure

0 1 3840.95

1 11 3824.65 initial simplex

2 12 3824.65 reflect

3 13 3824.65 reflect

4 14 3824.65 reflect

5 15 3824.65 reflect

6 17 3824.65 contract inside

7 19 3824.65 contract inside

8 21 3824.65 contract inside

9 23 3824.65 contract inside

10 25 3824.65 contract inside

11 27 3824.65 contract inside

12 29 3824.65 contract inside

13 31 3824.65 contract inside

14 33 3824.65 contract inside

15 34 3824.65 reflect

16 36 3824.65 contract inside

17 38 3824.65 contract inside

18 40 3824.65 contract inside

19 42 3824.65 contract inside

20 43 3824.65 reflect

21 44 3824.65 reflect

22 45 3824.65 reflect

23 46 3824.65 reflect

24 47 3824.65 reflect

25 48 3824.65 reflect

26 49 3824.65 reflect

27 50 3824.65 reflect

28 51 3824.65 reflect

29 53 3817.81 expand

30 54 3817.81 reflect

31 55 3817.81 reflect

32 57 3807.46 expand

33 58 3807.46 reflect

34 59 3807.46 reflect

35 61 3794.71 expand

36 62 3794.71 reflect

37 63 3794.71 reflect

38 64 3794.71 reflect

39 66 3773.21 expand

40 67 3773.21 reflect

41 68 3773.21 reflect

42 69 3773.21 reflect

43 71 3751.35 expand

44 72 3751.35 reflect

45 73 3751.35 reflect

46 74 3751.35 reflect

47 76 3716.59 expand

48 77 3716.59 reflect

49 78 3716.59 reflect

50 79 3716.59 reflect

51 81 3671.82 expand

52 82 3671.82 reflect

53 83 3671.82 reflect

54 84 3671.82 reflect

55 86 3615.41 expand

56 87 3615.41 reflect

57 88 3615.41 reflect

58 89 3615.41 reflect

59 91 3555.94 expand

60 92 3555.94 reflect

61 93 3555.94 reflect

62 95 3437.49 expand

63 96 3437.49 reflect

64 97 3437.49 reflect

65 98 3437.49 reflect

66 99 3437.49 reflect

67 101 3318.75 expand

68 102 3318.75 reflect

69 103 3318.75 reflect

70 105 3150.51 expand

71 106 3150.51 reflect

72 107 3150.51 reflect

73 108 3150.51 reflect

74 110 2923.25 expand

75 111 2923.25 reflect

76 112 2923.25 reflect

77 114 2699.48 expand

78 115 2699.48 reflect

79 116 2699.48 reflect

80 118 2318.5 expand

81 119 2318.5 reflect

82 120 2318.5 reflect

83 121 2318.5 reflect

84 123 2270.74 reflect

85 125 2230.18 reflect

86 127 2191.35 reflect

87 129 2153.5 reflect

88 131 2099.42 reflect

89 132 2099.42 reflect

90 133 2099.42 reflect

91 134 2099.42 reflect

92 135 2099.42 reflect

93 137 2099.42 contract inside

94 139 2099.42 contract inside

95 141 2099.42 contract inside

96 143 2099.42 contract inside

97 144 2099.42 reflect

98 145 2099.42 reflect

99 146 2099.42 reflect

100 148 2099.42 contract inside

101 150 2099.42 contract inside

102 152 2099.42 contract inside

103 154 2099.42 contract inside

104 156 2099.42 contract outside

105 158 2099.42 contract inside

106 160 2099.42 contract outside

107 161 2099.42 reflect

108 163 2098.2 contract inside

109 165 2098.2 contract inside

110 166 2098.2 reflect

111 168 2098.2 contract inside

112 170 2098.2 contract inside

113 172 2098.2 contract inside

114 174 2098.2 contract inside

115 176 2096.45 contract inside

116 178 2095.49 contract inside

117 180 2093.48 contract inside

118 182 2089.47 contract inside

119 184 2087.28 contract inside

120 186 2087.28 contract inside

121 188 2083.52 contract inside

122 189 2083.52 reflect

123 191 2083.52 contract inside

124 192 2083.52 reflect

125 193 2083.52 reflect

126 195 2080.51 contract inside

127 197 2080.51 contract inside

128 199 2078.76 contract inside

129 201 2078.76 contract inside

130 203 2078.03 contract inside

131 205 2076.81 contract inside

132 207 2075.49 contract inside

133 209 2075.49 contract outside

134 210 2075.49 reflect

135 212 2075.49 contract inside

136 214 2075.49 contract inside

137 216 2075.35 contract inside

138 218 2074.63 contract inside

139 220 2073.57 contract inside

140 222 2073.31 contract outside

141 223 2073.31 reflect

142 225 2072.19 contract inside

143 227 2071.47 contract inside

144 229 2071.47 contract outside

145 231 2071.47 contract inside

146 233 2071.47 contract inside

147 235 2071.23 contract inside

148 236 2071.23 reflect

149 237 2071.23 reflect

150 239 2071.23 contract inside

151 241 2070.34 contract inside

152 243 2070.34 contract inside

153 245 2070.34 contract inside

154 246 2070.34 reflect

155 248 2069.72 contract inside

156 249 2069.72 reflect

157 251 2069.72 contract inside

158 252 2069.72 reflect

159 254 2069.06 contract inside

160 256 2069 contract inside

161 257 2069 reflect

162 258 2069 reflect

163 260 2068.55 reflect

164 262 2068.55 contract inside

165 264 2068.55 contract inside

166 266 2068.55 contract inside

167 268 2068.55 contract inside

168 269 2068.55 reflect

169 271 2068.51 contract inside

170 273 2068.27 contract inside

171 274 2068.27 reflect

172 276 2068.27 contract inside

173 277 2068.27 reflect

174 279 2068.27 contract inside

175 280 2068.27 reflect

176 282 2068.27 contract outside

177 284 2068.27 contract inside

178 285 2068.27 reflect

179 287 2068.27 contract inside

180 289 2067.4 expand

181 290 2067.4 reflect

182 292 2067.4 contract inside

183 293 2067.4 reflect

184 294 2067.4 reflect

185 296 2067.4 contract inside

186 297 2067.4 reflect

187 298 2067.4 reflect

188 300 2065.61 expand

189 301 2065.61 reflect

190 302 2065.61 reflect

191 303 2065.61 reflect

192 304 2065.61 reflect

193 306 2064.46 expand

194 307 2064.46 reflect

195 308 2064.46 reflect

196 309 2064.46 reflect

197 310 2064.46 reflect

198 311 2064.46 reflect

199 312 2064.46 reflect

200 314 2063.79 expand

201 315 2063.79 reflect

202 317 2062.72 expand

203 319 2060.85 expand

204 320 2060.85 reflect

205 321 2060.85 reflect

206 322 2060.85 reflect

207 323 2060.85 reflect

208 324 2060.85 reflect

209 325 2060.85 reflect

210 326 2060.85 reflect

211 327 2060.85 reflect

212 328 2060.85 reflect

213 330 2059.21 expand

214 331 2059.21 reflect

215 333 2059.06 reflect

216 335 2058 expand

217 336 2058 reflect

218 337 2058 reflect

219 338 2058 reflect

220 339 2058 reflect

221 340 2058 reflect

222 342 2058 contract inside

223 344 2057.48 reflect

224 346 2057.48 contract inside

225 348 2057.48 contract inside

226 349 2057.48 reflect

227 351 2057.48 contract inside

228 352 2057.48 reflect

229 354 2057.45 contract inside

230 356 2057.45 contract inside

231 357 2057.45 reflect

232 358 2057.45 reflect

233 359 2057.45 reflect

234 360 2057.45 reflect

235 362 2057.45 contract inside

236 364 2057.45 contract outside

237 365 2057.45 reflect

238 367 2057.45 contract inside

239 369 2057.45 contract inside

240 371 2057.39 contract inside

241 373 2057.39 contract inside

242 375 2057.38 contract inside

243 377 2057.37 contract outside

244 378 2057.37 reflect

245 379 2057.37 reflect

246 381 2057.26 contract inside

247 383 2057.22 contract inside

248 385 2057.2 contract inside

249 387 2057.05 contract inside

250 389 2056.74 reflect

251 390 2056.74 reflect

252 392 2056.74 contract inside

253 394 2056.74 contract inside

254 395 2056.74 reflect

255 396 2056.74 reflect

256 397 2056.74 reflect

257 398 2056.74 reflect

258 400 2056.74 contract inside

259 401 2056.74 reflect

260 403 2056.74 contract inside

261 405 2056.74 contract inside

262 407 2056.74 contract inside

263 409 2056.74 contract inside

264 410 2056.74 reflect

265 411 2056.74 reflect

266 412 2056.74 reflect

267 414 2056.63 reflect

268 415 2056.63 reflect

269 417 2056.63 contract inside

270 419 2056.63 contract inside

271 420 2056.63 reflect

272 422 2056.5 reflect

273 423 2056.5 reflect

274 424 2056.5 reflect

275 425 2056.5 reflect

276 427 2056.5 contract outside

277 428 2056.5 reflect

278 430 2056.46 expand

279 442 2056.38 shrink

280 443 2056.38 reflect

281 455 2056.33 shrink

282 456 2056.33 reflect

283 458 2056.33 contract inside

284 460 2056.28 expand

285 462 2056.28 contract inside

286 463 2056.28 reflect

287 464 2056.28 reflect

288 465 2056.28 reflect

289 466 2056.28 reflect

290 467 2056.28 reflect

291 479 2056.27 shrink

292 481 2056.24 expand

293 482 2056.24 reflect

294 483 2056.24 reflect

295 484 2056.24 reflect

296 485 2056.24 reflect

297 487 2056.24 expand

298 488 2056.24 reflect

299 500 2056.23 shrink

300 501 2056.23 reflect

301 513 2056.23 shrink

302 515 2056.22 expand

303 516 2056.22 reflect

304 517 2056.22 reflect

305 518 2056.22 reflect

306 519 2056.22 reflect

307 520 2056.22 reflect

308 522 2056.22 contract inside

309 523 2056.22 reflect

310 524 2056.22 reflect

311 525 2056.22 reflect

312 527 2056.21 expand

313 528 2056.21 reflect

314 529 2056.21 reflect

315 531 2056.2 expand

316 532 2056.2 reflect

317 533 2056.2 reflect

318 534 2056.2 reflect

319 536 2056.2 contract inside

320 537 2056.2 reflect

321 539 2056.19 expand

322 540 2056.19 reflect

323 541 2056.19 reflect

324 543 2056.19 reflect

325 545 2056.19 contract inside

326 547 2056.17 expand

327 548 2056.17 reflect

328 549 2056.17 reflect

329 550 2056.17 reflect

330 552 2056.16 expand

331 553 2056.16 reflect

332 554 2056.16 reflect

333 556 2056.16 contract inside

334 557 2056.16 reflect

335 559 2056.15 reflect

336 561 2056.13 expand

337 562 2056.13 reflect

338 574 2056.13 shrink

339 575 2056.13 reflect

340 576 2056.13 reflect

341 578 2056.12 expand

342 579 2056.12 reflect

343 580 2056.12 reflect

344 581 2056.12 reflect

345 593 2056.12 shrink

346 594 2056.12 reflect

347 595 2056.12 reflect

348 597 2056.12 reflect

349 599 2056.11 expand

350 600 2056.11 reflect

351 601 2056.11 reflect

352 602 2056.11 reflect

353 603 2056.11 reflect

354 604 2056.11 reflect

355 606 2056.1 expand

356 608 2056.1 contract inside

357 609 2056.1 reflect

358 610 2056.1 reflect

359 611 2056.1 reflect

360 613 2056.09 expand

361 625 2056.09 shrink

362 626 2056.09 reflect

363 627 2056.09 reflect

364 628 2056.09 reflect

365 630 2056.08 expand

366 631 2056.08 reflect

367 632 2056.08 reflect

368 633 2056.08 reflect

369 635 2056.07 expand

370 636 2056.07 reflect

371 637 2056.07 reflect

372 639 2056.06 expand

373 640 2056.06 reflect

374 641 2056.06 reflect

375 642 2056.06 reflect

376 644 2056.05 expand

377 645 2056.05 reflect

378 646 2056.05 reflect

379 648 2056.04 expand

380 649 2056.04 reflect

381 650 2056.04 reflect

382 651 2056.04 reflect

383 652 2056.04 reflect

384 654 2056.03 expand

385 655 2056.03 reflect

386 656 2056.03 reflect

387 658 2056.01 expand

388 659 2056.01 reflect

389 660 2056.01 reflect

390 661 2056.01 reflect

391 662 2056.01 reflect

392 664 2055.97 expand

393 665 2055.97 reflect

394 667 2055.82 expand

395 668 2055.82 reflect

396 669 2055.82 reflect

397 670 2055.82 reflect

398 671 2055.82 reflect

399 673 2055.81 reflect

400 674 2055.81 reflect

401 675 2055.81 reflect

402 677 2055.81 contract inside

403 679 2055.81 contract inside

404 680 2055.81 reflect

405 681 2055.81 reflect

406 683 2055.81 contract inside

407 685 2055.81 contract inside

408 687 2055.81 contract inside

409 688 2055.81 reflect

410 689 2055.81 reflect

411 690 2055.81 reflect

412 691 2055.81 reflect

413 693 2055.81 contract outside

414 694 2055.81 reflect

415 696 2055.81 contract inside

416 698 2055.81 contract inside

417 710 2055.81 shrink

418 711 2055.81 reflect

419 712 2055.81 reflect

420 713 2055.81 reflect

421 714 2055.81 reflect

422 715 2055.81 reflect

423 716 2055.81 reflect

424 717 2055.81 reflect

425 718 2055.81 reflect

426 720 2055.81 contract inside

427 721 2055.81 reflect

428 723 2055.81 contract inside

429 724 2055.81 reflect

430 726 2055.81 contract inside

431 728 2055.81 contract inside

432 740 2055.81 shrink

433 741 2055.81 reflect

434 742 2055.81 reflect

435 744 2055.81 contract outside

436 756 2055.81 shrink

437 757 2055.81 reflect

438 759 2055.81 contract inside

439 771 2055.81 shrink

440 783 2055.81 shrink

441 784 2055.81 reflect

442 785 2055.81 reflect

443 797 2055.81 shrink

444 809 2055.81 shrink

445 810 2055.81 reflect

446 822 2055.81 shrink

447 834 2055.81 shrink

448 846 2055.81 shrink

449 858 2055.81 shrink

450 870 2055.81 shrink

451 882 2055.81 shrink

452 894 2055.81 shrink

453 906 2055.81 shrink

454 907 2055.81 reflect

455 919 2055.81 shrink

456 931 2055.81 shrink

457 943 2055.81 shrink

458 944 2055.81 reflect

459 956 2055.81 shrink

460 957 2055.81 reflect

461 958 2055.81 reflect

462 970 2055.81 shrink

463 971 2055.81 reflect

464 972 2055.81 reflect

465 973 2055.81 reflect

466 985 2055.81 shrink

467 986 2055.81 reflect

468 987 2055.81 reflect

469 999 2055.81 shrink

470 1000 2055.81 reflect

471 1012 2055.81 shrink

472 1013 2055.81 reflect

473 1015 2055.81 contract inside

474 1027 2055.81 shrink

475 1029 2055.81 contract inside

476 1041 2055.81 shrink

477 1053 2055.81 shrink

478 1054 2055.81 reflect

479 1066 2055.81 shrink

480 1067 2055.81 reflect

481 1068 2055.81 reflect

482 1080 2055.81 shrink

483 1092 2055.81 shrink

484 1104 2055.81 shrink

485 1106 2055.81 contract inside

486 1118 2055.81 shrink

487 1119 2055.81 reflect

488 1120 2055.81 reflect

489 1121 2055.81 reflect

490 1122 2055.81 reflect

491 1123 2055.81 reflect

492 1124 2055.81 reflect

493 1125 2055.81 reflect

494 1126 2055.81 reflect

495 1138 2055.81 shrink

496 1139 2055.81 reflect

497 1140 2055.81 reflect

498 1152 2055.81 shrink

499 1153 2055.81 reflect

500 1155 2055.81 contract inside

501 1157 2055.81 contract inside

502 1158 2055.81 reflect

503 1160 2055.81 contract inside

504 1172 2055.81 shrink

505 1184 2055.81 shrink

506 1185 2055.81 reflect

507 1187 2055.81 contract inside

508 1199 2055.81 shrink

509 1200 2055.81 reflect

510 1202 2055.81 contract inside

511 1203 2055.81 reflect

512 1215 2055.81 shrink

513 1216 2055.81 reflect

514 1217 2055.81 reflect

515 1218 2055.81 reflect

516 1219 2055.81 reflect

517 1220 2055.81 reflect

518 1221 2055.81 reflect

519 1223 2055.81 contract outside

520 1235 2055.81 shrink

521 1236 2055.81 reflect

522 1238 2055.81 contract inside

523 1240 2055.81 contract outside

524 1242 2055.81 contract inside

525 1244 2055.81 contract inside

526 1256 2055.81 shrink

527 1257 2055.81 reflect

528 1258 2055.81 reflect

529 1259 2055.81 reflect

530 1260 2055.81 reflect

531 1261 2055.81 reflect

532 1263 2055.81 contract outside

533 1275 2055.81 shrink

534 1276 2055.81 reflect

535 1277 2055.81 reflect

536 1278 2055.81 reflect

537 1279 2055.81 reflect

538 1280 2055.81 reflect

539 1281 2055.81 reflect

540 1282 2055.81 reflect

541 1283 2055.81 reflect

542 1284 2055.81 reflect

543 1285 2055.81 reflect

544 1286 2055.81 reflect

545 1287 2055.81 reflect

546 1288 2055.81 reflect

547 1289 2055.81 reflect

548 1301 2055.81 shrink

549 1302 2055.81 reflect

550 1303 2055.81 reflect

551 1304 2055.81 reflect

552 1305 2055.81 reflect

553 1307 2055.81 contract inside

554 1309 2055.81 contract inside

555 1311 2055.81 contract inside

556 1313 2055.81 contract inside

557 1325 2055.81 shrink

558 1326 2055.81 reflect

559 1328 2055.81 contract inside

560 1340 2055.81 shrink

Optimization terminated:

the current x satisfies the termination criteria using OPTIONS.TolX of 1.000000e-004

and F(X) satisfies the convergence criteria using OPTIONS.TolFun of 1.000000e-015

FMINSEARCH terminated.

Columns 1 through 10

x =[48.9196,1.4864,2.5901,0.9381,-0.1470,-0.0008,2.7621,2.0000,1.9383,-0.0080];

fval =2.0558e+003; exitflag = 0;

Sending a stop signal to all the labs ... stopped.

Caculation finished and the elapsedTime= 86426.2594=24h

P\_asterisk =10.1606;

L =0.9998; delta =-1.8437e-004; penaltyfun1 =0.3687;

penaltyfun2 =45.7143;

AR =1.3811; Re =108.5641; penaltyfun5 =2000;

obj\_function =2.0562e+003;

Elapsed time is 25.589212 seconds.