**20150602-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 5024 7216 0

2 300 5019 7618 0

3 400 4307 7746 0

4 500 4305 7544 0

5 600 4000 7245 0

6 700 4000 7191 1

7 800 4000 7288 2

8 900 4000 6638 0

9 1000 4000 6551 0

10 1100 4000 6539 1

11 1200 4000 6302 0

12 1300 4000 6392 1

13 1400 3998 6219 0

14 1500 3997 6293 0

15 1600 3997 5915 1

16 1700 3997 5856 2

17 1800 3995 5759 0

18 1900 3994 5856 0

19 2000 3994 5763 1

20 2100 3993 5543 0

21 2200 3991 5746 0

22 2300 3991 5885 1

23 2400 3991 5803 2

24 2500 3991 5921 3

25 2600 3987 5442 0

26 2700 3987 5772 1

27 2800 3984 5814 0

28 2900 3984 5825 1

29 3000 3984 5927 0

30 3100 3978 6022 0

31 3200 3978 6031 1

32 3300 3974 7140 0

33 3400 3974 5868 1

34 3500 3974 6239 2

35 3600 3974 6078 3

36 3700 3973 5983 0

37 3800 3973 5712 1

38 3900 3973 5845 0

39 4000 3973 5584 1

40 4100 3973 5539 2

41 4200 3969 5656 0

42 4300 3956 6002 0

43 4400 3955 5625 0

44 4500 3955 5668 0

45 4600 3954 5670 0

46 4700 3953 5708 0

47 4800 3953 5719 1

48 4900 3953 5899 0

49 5000 3953 5799 1

50 5100 3953 5721 2

51 5200 3953 5558 3

52 5300 3953 5452 4

53 5400 3953 5463 5

54 5500 3953 5799 6

55 5600 3953 5902 7

56 5700 3953 6310 8

57 5800 3941 5976 0

58 5900 3926 6092 0

59 6000 3926 5750 1

60 6100 3926 5780 2

61 6200 3926 5659 3

62 6300 3926 5998 4

63 6400 3926 5835 5

64 6500 3926 5571 6

65 6600 3904 5609 0

66 6700 3902 5658 0

67 6800 3901 5591 0

68 6900 3901 5635 1

69 7000 3901 5629 2

70 7100 3901 5493 3

71 7200 3901 5263 4

72 7300 3893 5171 0

73 7400 3883 5422 0

74 7500 3868 5237 0

75 7600 3868 5209 1

76 7700 3868 5277 2

77 7800 3868 5398 3

78 7900 3868 5359 4

79 8000 3868 5228 5

80 8100 3867 5194 0

81 8200 3867 5376 1

82 8300 3867 5347 2

83 8400 3867 5050 3

84 8500 3819 5219 0

85 8600 3819 5475 1

86 8700 3819 5264 0

87 8800 3819 5118 1

88 8900 3819 4830 2

89 9000 3819 4934 3

90 9100 3819 5232 4

91 9200 3816 5176 0

92 9300 3815 5253 0

93 9400 3815 5176 1

94 9500 3811 5086 0

95 9600 3811 5068 1

96 9700 3797 5061 0

97 9800 3788 5061 0

98 9900 3781 4902 0

99 10000 3776 4752 0

100 10100 3776 4708 1

101 10200 3776 4805 2

102 10300 3776 4853 0

103 10400 3768 4840 0

104 10500 3768 4808 1

105 10600 3768 4655 2

106 10700 3766 4572 0

107 10800 3766 4597 0

108 10900 3766 4767 1

109 11000 3766 4954 0

110 11100 3761 4946 0

111 11200 3760 4730 0

112 11300 3759 4783 0

113 11400 3728 4749 0

114 11500 3728 4676 0

115 11600 3723 4631 0

116 11700 3723 4588 1

117 11800 3722 4656 0

118 11900 3722 4554 0

119 12000 3722 4577 0

120 12100 3696 4536 0

121 12200 3693 4519 0

122 12300 3678 4422 0

123 12400 3678 4493 1

124 12500 3671 4343 0

125 12600 3667 4198 0

126 12700 3667 4340 1

127 12800 3667 4354 2

128 12900 3667 4264 3

129 13000 3661 4340 0

130 13100 3661 4348 1

131 13200 3658 4358 0

132 13300 3658 4279 0

133 13400 3656 4209 0

134 13500 3656 4267 1

135 13600 3656 4232 2

136 13700 3656 4161 3

137 13800 3656 4099 0

138 13900 3656 4198 1

139 14000 3656 4326 2

140 14100 3656 4372 3

141 14200 3656 4234 4

142 14300 3652 4312 0

143 14400 3646 4250 0

144 14500 3646 4203 1

145 14600 3633 4176 0

146 14700 3633 4249 1

147 14800 3633 4184 2

148 14900 3633 4130 3

149 15000 3633 4081 4

150 15100 3633 4098 0

151 15200 3633 4030 1

152 15300 3627 4032 0

153 15400 3608 4039 0

154 15500 3608 3971 0

155 15600 3608 3936 1

156 15700 3608 3981 2

157 15800 3608 4023 3

158 15900 3563 3996 0

159 16000 3563 4034 1

160 16100 3190 4067 0

161 16200 3190 4170 1

162 16300 3142 4194 0

163 16400 2824 4268 0

164 16500 2824 4318 1

165 16600 2824 4375 2

166 16700 2672 4180 0

167 16800 2550 4134 0

168 16900 2550 4072 1

169 17000 2550 3993 2

170 17100 2498 3876 0

171 17200 2485 3711 0

172 17300 2469 3380 0

173 17400 2349 3258 0

174 17500 2299 3165 0

175 17600 2299 3059 1

176 17700 2299 3090 2

177 17800 2287 2903 0

178 17900 2274 3002 0

179 18000 2254 2932 0

180 18100 2254 2938 1

181 18200 2234 2805 0

182 18300 2234 2874 1

183 18400 2233 2824 0

184 18500 2228 2798 0

185 18600 2214 2879 0

186 18700 2181 2730 0

187 18800 2181 2733 0

188 18900 2177 2718 0

189 19000 2177 2658 0

190 19100 2171 2632 0

191 19200 2166 2619 0

192 19300 2154 2443 0

193 19400 2154 2495 1

194 19500 2153 2520 0

195 19600 2146 2487 0

196 19700 2144 2499 0

197 19800 2142 2508 0

198 19900 2138 2424 0

199 20000 2131 2495 0

200 20100 2131 2389 1

Optimization terminated: maximum number of generations exceeded.

Switching to the hybrid optimization algorithm (FMINSEARCH).

Iteration Func-count min f(x) Procedure

0 1 2131.34

1 11 1983.31 initial simplex

2 13 1983.31 contract inside

3 15 1983.31 contract inside

4 17 1983.31 contract outside

5 19 1983.31 contract inside

6 21 1983.31 contract inside

7 23 1983.31 contract inside

8 25 1983.31 contract inside

9 26 1983.31 reflect

10 28 1983.31 contract inside

11 30 1983.31 contract inside

12 31 1983.31 reflect

13 32 1983.31 reflect

14 33 1983.31 reflect

15 34 1983.31 reflect

16 35 1983.31 reflect

17 36 1983.31 reflect

18 37 1983.31 reflect

19 38 1983.31 reflect

20 40 1905.14 expand

21 41 1905.14 reflect

22 42 1905.14 reflect

23 44 1820.75 expand

24 45 1820.75 reflect

25 46 1820.75 reflect

26 47 1820.75 reflect

27 49 1697.63 expand

28 50 1697.63 reflect

29 51 1697.63 reflect

30 53 1626.83 expand

31 55 1620.11 reflect

32 57 1471.77 expand

33 58 1471.77 reflect

34 59 1471.77 reflect

35 60 1471.77 reflect

36 61 1471.77 reflect

37 62 1471.77 reflect

38 63 1471.77 reflect

39 64 1471.77 reflect

40 65 1471.77 reflect

41 67 1471.77 contract inside

42 68 1471.77 reflect

43 70 1471.77 contract inside

44 72 1471.77 contract inside

45 73 1471.77 reflect

46 74 1471.77 reflect

47 75 1471.77 reflect

48 76 1471.77 reflect

49 77 1471.77 reflect

50 79 1471.77 contract outside

51 81 1471.77 contract inside

52 82 1471.77 reflect

53 83 1471.77 reflect

54 84 1471.77 reflect

55 85 1471.77 reflect

56 87 1437.76 reflect

57 88 1437.76 reflect

58 89 1437.76 reflect

59 91 1437.76 contract inside

60 93 1408.95 reflect

61 94 1408.95 reflect

62 96 1408.95 contract outside

63 97 1408.95 reflect

64 99 1408.55 reflect

65 101 1408.55 contract inside

66 102 1408.55 reflect

67 104 1351.9 expand

68 105 1351.9 reflect

69 106 1351.9 reflect

70 107 1351.9 reflect

71 108 1351.9 reflect

72 109 1351.9 reflect

73 111 1351.9 contract outside

74 113 1312.6 expand

75 114 1312.6 reflect

76 115 1312.6 reflect

77 116 1312.6 reflect

78 117 1312.6 reflect

79 119 1249.91 expand

80 120 1249.91 reflect

81 121 1249.91 reflect

82 122 1249.91 reflect

83 123 1249.91 reflect

84 124 1249.91 reflect

85 125 1249.91 reflect

86 127 1247.82 reflect

87 129 1207.74 expand

88 130 1207.74 reflect

89 131 1207.74 reflect

90 132 1207.74 reflect

91 134 1155.17 expand

92 135 1155.17 reflect

93 136 1155.17 reflect

94 137 1155.17 reflect

95 138 1155.17 reflect

96 140 1101.53 expand

97 141 1101.53 reflect

98 142 1101.53 reflect

99 143 1101.53 reflect

100 144 1101.53 reflect

101 146 1101.09 reflect

102 147 1101.09 reflect

103 149 1101.09 contract inside

104 151 1101.09 contract inside

105 153 1056.72 reflect

106 154 1056.72 reflect

107 156 1056.72 contract inside

108 158 1056.72 contract inside

109 160 1049.01 reflect

110 161 1049.01 reflect

111 163 1049.01 contract inside

112 164 1049.01 reflect

113 166 1049.01 contract inside

114 167 1049.01 reflect

115 169 1049.01 contract inside

116 171 1044.46 reflect

117 173 1044.46 contract inside

118 174 1044.46 reflect

119 176 1017.73 expand

120 177 1017.73 reflect

121 179 1017.73 contract inside

122 180 1017.73 reflect

123 181 1017.73 reflect

124 182 1017.73 reflect

125 184 1017.73 contract inside

126 186 1017.73 contract inside

127 188 1017.73 contract inside

128 190 1017.73 contract inside

129 191 1017.73 reflect

130 192 1017.73 reflect

131 194 1006.71 expand

132 196 1006.71 contract inside

133 198 997.924 reflect

134 199 997.924 reflect

135 200 997.924 reflect

136 201 997.924 reflect

137 203 966.04 expand

138 204 966.04 reflect

139 205 966.04 reflect

140 207 937.655 expand

141 208 937.655 reflect

142 209 937.655 reflect

143 210 937.655 reflect

144 211 937.655 reflect

145 213 912.198 expand

146 214 912.198 reflect

147 215 912.198 reflect

148 216 912.198 reflect

149 217 912.198 reflect

150 219 888.752 expand

151 220 888.752 reflect

152 221 888.752 reflect

153 222 888.752 reflect

154 223 888.752 reflect

155 224 888.752 reflect

156 226 883.279 expand

157 228 882.818 reflect

158 229 882.818 reflect

159 230 882.818 reflect

160 232 817.873 expand

161 233 817.873 reflect

162 234 817.873 reflect

163 235 817.873 reflect

164 236 817.873 reflect

165 237 817.873 reflect

166 238 817.873 reflect

167 239 817.873 reflect

168 240 817.873 reflect

169 241 817.873 reflect

170 243 776.312 expand

171 244 776.312 reflect

172 245 776.312 reflect

173 246 776.312 reflect

174 248 723.633 expand

175 249 723.633 reflect

176 251 723.633 contract inside

177 252 723.633 reflect

178 253 723.633 reflect

179 254 723.633 reflect

180 255 723.633 reflect

181 257 712.23 reflect

182 259 707.318 expand

183 261 707.234 reflect

184 263 688.676 expand

185 265 592.819 expand

186 266 592.819 reflect

187 267 592.819 reflect

188 269 592.819 contract inside

189 270 592.819 reflect

190 271 592.819 reflect

191 272 592.819 reflect

192 273 592.819 reflect

193 275 539.215 expand

194 276 539.215 reflect

195 277 539.215 reflect

196 278 539.215 reflect

197 279 539.215 reflect

198 280 539.215 reflect

199 281 539.215 reflect

200 283 509.955 expand

201 285 505.905 expand

202 287 475.215 reflect

203 288 475.215 reflect

204 289 475.215 reflect

205 291 475.215 contract inside

206 292 475.215 reflect

207 294 475.215 contract inside

208 295 475.215 reflect

209 296 475.215 reflect

210 297 475.215 reflect

211 298 475.215 reflect

212 299 475.215 reflect

213 301 475.215 contract outside

214 302 475.215 reflect

215 303 475.215 reflect

216 305 454.438 expand

217 307 444.68 expand

218 308 444.68 reflect

219 309 444.68 reflect

220 311 444.68 contract inside

221 313 417.122 expand

222 314 417.122 reflect

223 315 417.122 reflect

224 317 403.863 reflect

225 318 403.863 reflect

226 319 403.863 reflect

227 321 389.589 reflect

228 322 389.589 reflect

229 324 385.442 reflect

230 325 385.442 reflect

231 326 385.442 reflect

232 328 374.827 reflect

233 330 361.059 reflect

234 332 361.059 contract outside

235 333 361.059 reflect

236 335 350.696 reflect

237 337 350.696 contract inside

238 339 340.659 expand

239 340 340.659 reflect

240 342 316.761 expand

241 343 316.761 reflect

242 344 316.761 reflect

243 346 287.029 expand

244 348 246.585 expand

245 349 246.585 reflect

246 350 246.585 reflect

247 351 246.585 reflect

248 353 231.812 reflect

249 355 230.115 reflect

250 357 230.115 contract inside

251 359 203.763 expand

252 361 149.706 expand

253 363 134.156 reflect

254 364 134.156 reflect

255 365 134.156 reflect

256 366 134.156 reflect

257 367 134.156 reflect

258 368 134.156 reflect

259 370 108.695 contract inside

260 372 108.695 contract inside

261 374 65.2061 reflect

262 375 65.2061 reflect

263 376 65.2061 reflect

264 377 65.2061 reflect

265 379 65.2061 contract inside

266 381 65.2061 contract inside

267 382 65.2061 reflect

268 384 46.4154 reflect

269 385 46.4154 reflect

270 387 46.4154 contract inside

271 389 46.4154 contract inside

272 391 46.4154 contract inside

273 392 46.4154 reflect

274 394 46.4154 contract inside

275 395 46.4154 reflect

276 397 46.4154 contract inside

277 399 46.4154 contract outside

278 400 46.4154 reflect

279 401 46.4154 reflect

280 403 46.4154 contract inside

281 404 46.4154 reflect

282 406 31.9529 reflect

283 407 31.9529 reflect

284 409 31.9529 contract inside

285 411 31.9529 contract inside

286 412 31.9529 reflect

287 413 31.9529 reflect

288 415 31.9529 contract inside

289 417 31.9529 contract outside

290 419 31.9529 contract outside

291 421 25.7593 contract inside

292 422 25.7593 reflect

293 424 25.7593 contract inside

294 426 25.7593 contract inside

295 427 25.7593 reflect

296 428 25.7593 reflect

297 430 22.8874 contract inside

298 432 22.8874 contract inside

299 434 22.8874 contract inside

300 436 22.8874 contract inside

301 437 22.8874 reflect

302 439 21.1526 reflect

303 441 21.1526 contract inside

304 443 21.1526 contract inside

305 445 21.1526 contract inside

306 447 21.1526 contract inside

307 449 21.1526 contract inside

308 451 19.809 contract inside

309 453 13.5506 contract inside

310 454 13.5506 reflect

311 456 13.5506 contract inside

312 458 13.5506 contract inside

313 460 13.5506 contract inside

314 462 13.5506 contract inside

315 464 13.5506 contract inside

316 466 13.5506 contract inside

317 467 13.5506 reflect

318 469 13.5506 contract inside

319 471 13.5506 contract outside

320 473 13.5506 contract inside

321 475 13.5506 contract inside

322 477 13.5506 contract inside

323 479 13.5506 contract inside

324 481 13.5506 contract inside

325 483 13.5506 contract inside

326 485 13.5506 contract inside

327 487 13.5506 contract inside

328 489 13.5506 contract inside

329 490 13.5506 reflect

330 491 13.5506 reflect

331 492 13.5506 reflect

332 494 13.5506 contract inside

333 496 13.3021 contract inside

334 498 13.0784 contract inside

335 500 13.0784 contract inside

336 502 12.9858 contract inside

337 503 12.9858 reflect

338 505 12.9858 contract inside

339 507 12.9 contract inside

340 509 12.9 contract inside

341 510 12.9 reflect

342 512 12.6475 contract inside

343 514 12.592 contract inside

344 515 12.592 reflect

345 517 12.592 contract inside

346 518 12.592 reflect

347 520 12.592 contract inside

348 522 12.3815 contract inside

349 523 12.3815 reflect

350 525 12.3815 contract inside

351 527 11.8984 reflect

352 528 11.8984 reflect

353 530 11.8984 contract inside

354 531 11.8984 reflect

355 533 11.8984 contract inside

356 534 11.8984 reflect

357 536 11.8984 contract inside

358 538 11.8984 contract inside

359 539 11.8984 reflect

360 541 11.8984 contract inside

361 543 11.7393 reflect

362 545 11.7393 contract inside

363 546 11.7393 reflect

364 548 11.7393 contract inside

365 550 11.7393 contract inside

366 552 11.7393 contract inside

367 554 11.7393 contract inside

368 555 11.7393 reflect

369 557 11.7393 contract inside

370 559 11.7393 contract outside

371 561 11.7393 contract inside

372 563 11.7393 contract inside

373 565 11.7393 contract inside

374 567 11.7393 contract inside

375 569 11.7393 contract inside

376 570 11.7393 reflect

377 571 11.7393 reflect

378 573 11.7393 contract inside

379 575 11.7393 contract inside

380 587 11.6941 shrink

381 588 11.6941 reflect

382 589 11.6941 reflect

383 591 11.6941 contract inside

384 592 11.6941 reflect

385 594 11.6941 contract inside

386 595 11.6941 reflect

387 597 11.6941 contract inside

388 599 11.6941 contract inside

389 601 11.6941 contract inside

390 603 11.6941 contract inside

391 604 11.6941 reflect

392 616 11.6931 shrink

393 628 11.6931 shrink

394 629 11.6931 reflect

395 631 11.6931 contract inside

396 632 11.6931 reflect

397 634 11.6738 expand

398 635 11.6738 reflect

399 637 11.6738 contract inside

400 638 11.6738 reflect

401 639 11.6738 reflect

402 640 11.6738 reflect

403 642 11.6607 expand

404 643 11.6607 reflect

405 644 11.6607 reflect

406 646 11.6607 contract inside

407 647 11.6607 reflect

408 649 11.6607 contract inside

409 650 11.6607 reflect

410 651 11.6607 reflect

411 653 11.6607 contract inside

412 655 11.6607 contract inside

413 657 11.6607 contract inside

414 669 11.6607 shrink

415 670 11.6607 reflect

416 672 11.6607 contract inside

417 673 11.6607 reflect

418 674 11.6607 reflect

419 676 11.6607 contract inside

420 688 11.6607 shrink

421 690 11.6607 contract inside

422 692 11.6607 contract outside

423 694 11.6607 contract inside

424 695 11.6607 reflect

425 697 11.6604 reflect

426 699 11.6604 contract inside

427 700 11.6604 reflect

428 701 11.6604 reflect

429 702 11.6604 reflect

430 704 11.6602 reflect

431 705 11.6602 reflect

432 706 11.6602 reflect

433 707 11.6602 reflect

434 708 11.6602 reflect

435 710 11.6602 contract inside

436 711 11.6602 reflect

437 713 11.6602 contract inside

438 715 11.6587 reflect

439 716 11.6587 reflect

440 717 11.6587 reflect

441 719 11.6587 contract inside

442 720 11.6587 reflect

443 722 11.6586 reflect

444 724 11.6586 contract inside

445 726 11.6577 expand

446 727 11.6577 reflect

447 728 11.6577 reflect

448 730 11.6577 contract inside

449 732 11.6577 contract inside

450 734 11.6577 contract inside

451 735 11.6577 reflect

452 736 11.6577 reflect

453 737 11.6577 reflect

454 739 11.6576 reflect

455 741 11.6576 contract inside

456 743 11.6576 contract inside

457 745 11.6576 contract inside

458 746 11.6576 reflect

459 748 11.6567 expand

460 750 11.6567 contract inside

461 751 11.6567 reflect

462 753 11.6567 contract inside

463 754 11.6567 reflect

464 755 11.6567 reflect

465 756 11.6567 reflect

466 757 11.6567 reflect

467 759 11.6563 reflect

468 761 11.6559 reflect

469 762 11.6559 reflect

470 763 11.6559 reflect

471 765 11.6551 expand

472 766 11.6551 reflect

473 767 11.6551 reflect

474 768 11.6551 reflect

475 770 11.6539 expand

476 771 11.6539 reflect

477 772 11.6539 reflect

478 773 11.6539 reflect

479 775 11.6539 contract inside

480 776 11.6539 reflect

481 777 11.6539 reflect

482 789 11.6539 shrink

483 790 11.6539 reflect

484 791 11.6539 reflect

485 793 11.6539 contract inside

486 795 11.6535 expand

487 797 11.6535 contract inside

488 798 11.6535 reflect

489 799 11.6535 reflect

490 801 11.653 expand

491 802 11.653 reflect

492 803 11.653 reflect

493 805 11.653 contract inside

494 806 11.653 reflect

495 807 11.653 reflect

496 809 11.6524 expand

497 810 11.6524 reflect

498 812 11.6524 contract inside

499 813 11.6524 reflect

500 814 11.6524 reflect

501 816 11.6524 contract inside

502 817 11.6524 reflect

503 819 11.6523 reflect

504 820 11.6523 reflect

505 822 11.6521 reflect

506 824 11.6516 expand

507 825 11.6516 reflect

508 826 11.6516 reflect

509 828 11.6511 expand

510 829 11.6511 reflect

511 830 11.6511 reflect

512 831 11.6511 reflect

513 832 11.6511 reflect

514 834 11.6508 reflect

515 836 11.6503 expand

516 838 11.6503 contract inside

517 840 11.6503 contract inside

518 841 11.6503 reflect

519 842 11.6503 reflect

520 844 11.6497 expand

521 845 11.6497 reflect

522 846 11.6497 reflect

523 847 11.6497 reflect

524 849 11.6497 contract inside

525 851 11.6487 expand

526 853 11.6487 contract inside

527 854 11.6487 reflect

528 855 11.6487 reflect

529 856 11.6487 reflect

530 857 11.6487 reflect

531 858 11.6487 reflect

532 860 11.6475 expand

533 861 11.6475 reflect

534 862 11.6475 reflect

535 863 11.6475 reflect

536 865 11.6475 contract inside

537 866 11.6475 reflect

538 867 11.6475 reflect

539 868 11.6475 reflect

540 870 11.6462 expand

541 872 11.6462 contract inside

542 873 11.6462 reflect

543 874 11.6462 reflect

544 875 11.6462 reflect

545 876 11.6462 reflect

546 878 11.6444 expand

547 879 11.6444 reflect

548 880 11.6444 reflect

549 881 11.6444 reflect

550 883 11.6444 contract inside

551 885 11.6442 reflect

552 886 11.6442 reflect

553 888 11.6442 contract inside

554 890 11.6442 contract inside

555 891 11.6442 reflect

556 893 11.6428 expand

557 894 11.6428 reflect

558 896 11.6428 contract inside

559 898 11.6428 contract inside

560 900 11.6428 contract inside

561 901 11.6428 reflect

562 902 11.6428 reflect

563 904 11.6428 contract inside

564 905 11.6428 reflect

565 906 11.6428 reflect

566 907 11.6428 reflect

567 908 11.6428 reflect

568 910 11.6428 contract inside

569 911 11.6428 reflect

570 912 11.6428 reflect

571 914 11.6426 reflect

572 916 11.6426 contract inside

573 918 11.6426 contract inside

574 930 11.6425 shrink

575 931 11.6425 reflect

576 933 11.6424 reflect

577 935 11.6424 contract inside

578 937 11.6423 reflect

579 939 11.6423 contract inside

580 941 11.6423 contract inside

581 943 11.6423 reflect

582 945 11.6423 contract inside

583 947 11.6421 expand

584 948 11.6421 reflect

585 950 11.6421 contract inside

586 952 11.6421 contract inside

587 953 11.6421 reflect

588 954 11.6421 reflect

589 955 11.6421 reflect

590 957 11.6421 contract inside

591 958 11.6421 reflect

592 960 11.6419 expand

593 962 11.6419 contract outside

594 964 11.6419 contract inside

595 965 11.6419 reflect

596 966 11.6419 reflect

597 967 11.6419 reflect

598 969 11.6418 reflect

599 971 11.6418 contract inside

600 973 11.6418 contract inside

601 985 11.6418 shrink

602 986 11.6418 reflect

603 988 11.6418 contract inside

604 989 11.6418 reflect

605 991 11.6418 reflect

606 993 11.6418 expand

607 994 11.6418 reflect

608 995 11.6418 reflect

609 997 11.6418 reflect

610 998 11.6418 reflect

611 1000 11.6418 contract inside

612 1002 11.6417 expand

613 1003 11.6417 reflect

614 1004 11.6417 reflect

615 1006 11.6417 reflect

616 1008 11.6417 contract inside

617 1010 11.6416 expand

618 1011 11.6416 reflect

619 1012 11.6416 reflect

620 1013 11.6416 reflect

621 1014 11.6416 reflect

622 1016 11.6415 expand

623 1018 11.6415 contract inside

624 1019 11.6415 reflect

625 1020 11.6415 reflect

626 1021 11.6415 reflect

627 1022 11.6415 reflect

628 1024 11.6415 contract inside

629 1025 11.6415 reflect

630 1026 11.6415 reflect

631 1027 11.6415 reflect

632 1028 11.6415 reflect

633 1029 11.6415 reflect

634 1030 11.6415 reflect

635 1031 11.6415 reflect

636 1032 11.6415 reflect

637 1034 11.6415 reflect

638 1035 11.6415 reflect

639 1037 11.6415 contract inside

640 1039 11.6415 contract inside

641 1041 11.6415 contract outside

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663 1075 11.6415 contract inside

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714 1156 11.6412 contract inside

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831 1338 11.6329 contract inside

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914 1463 11.6175 contract inside

915 1465 11.6175 contract inside

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1264 2003 11.5681 contract inside

1265 2005 11.5681 contract inside

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1276 2023 11.5645 contract inside

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1342 2127 11.5483 contract inside

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1391 2211 11.5425 contract inside

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1404 2238 11.5412 shrink

1405 2239 11.5412 reflect

1406 2251 11.5412 shrink

1407 2252 11.5412 reflect

1408 2253 11.5412 reflect

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1412 2259 11.5409 expand

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1414 2261 11.5409 reflect

1415 2262 11.5409 reflect

1416 2264 11.5409 contract inside

1417 2266 11.5409 contract inside

1418 2267 11.5409 reflect

1419 2269 11.5408 expand

1420 2270 11.5408 reflect

1421 2271 11.5408 reflect

1422 2273 11.5408 contract inside

1423 2274 11.5408 reflect

1424 2276 11.5408 reflect

1425 2278 11.5408 contract inside

1426 2280 11.5408 contract inside

1427 2282 11.5407 reflect

1428 2284 11.5406 expand

1429 2285 11.5406 reflect

1430 2286 11.5406 reflect

1431 2288 11.5406 contract inside

1432 2289 11.5406 reflect

1433 2301 11.5405 shrink

1434 2303 11.5404 expand

1435 2304 11.5404 reflect

1436 2305 11.5404 reflect

1437 2306 11.5404 reflect

1438 2308 11.5404 reflect

1439 2310 11.5402 expand

1440 2312 11.5402 contract inside

1441 2313 11.5402 reflect

1442 2315 11.5402 contract inside

1443 2316 11.5402 reflect

1444 2318 11.5402 contract inside

1445 2319 11.5402 reflect

1446 2320 11.5402 reflect

1447 2321 11.5402 reflect

1448 2323 11.5401 expand

1449 2324 11.5401 reflect

1450 2325 11.5401 reflect

1451 2326 11.5401 reflect

1452 2328 11.5399 expand

1453 2329 11.5399 reflect

1454 2331 11.5399 contract inside

1455 2333 11.5399 contract inside

1456 2334 11.5399 reflect

1457 2335 11.5399 reflect

1458 2336 11.5399 reflect

1459 2338 11.5397 expand

1460 2339 11.5397 reflect

1461 2340 11.5397 reflect

1462 2342 11.5395 expand

1463 2343 11.5395 reflect

1464 2344 11.5395 reflect

1465 2346 11.5395 contract inside

1466 2347 11.5395 reflect

1467 2349 11.5395 reflect

1468 2351 11.5392 expand

1469 2353 11.5392 contract inside

1470 2354 11.5392 reflect

1471 2355 11.5392 reflect

1472 2356 11.5392 reflect

1473 2358 11.539 expand

1474 2359 11.539 reflect

1475 2360 11.539 reflect

1476 2361 11.539 reflect

1477 2363 11.5389 reflect

1478 2365 11.5386 expand

1479 2367 11.5386 contract inside

1480 2368 11.5386 reflect

1481 2369 11.5386 reflect

1482 2370 11.5386 reflect

1483 2372 11.5384 expand

1484 2373 11.5384 reflect

1485 2374 11.5384 reflect

1486 2376 11.5384 contract inside

1487 2378 11.5384 contract inside

1488 2380 11.5382 expand

1489 2382 11.5382 contract inside

1490 2383 11.5382 reflect

1491 2384 11.5382 reflect

1492 2385 11.5382 reflect

1493 2386 11.5382 reflect

1494 2387 11.5382 reflect

1495 2388 11.5382 reflect

1496 2390 11.5381 expand

1497 2392 11.5381 contract inside

1498 2393 11.5381 reflect

1499 2394 11.5381 reflect

1500 2395 11.5381 reflect

1501 2396 11.5381 reflect

1502 2398 11.5381 expand

1503 2400 11.5381 contract inside

1504 2402 11.5379 expand

1505 2403 11.5379 reflect

1506 2404 11.5379 reflect

1507 2405 11.5379 reflect

1508 2407 11.5377 expand

1509 2409 11.5377 contract inside

1510 2410 11.5377 reflect

1511 2411 11.5377 reflect

1512 2412 11.5377 reflect

1513 2413 11.5377 reflect

1514 2414 11.5377 reflect

1515 2416 11.5377 contract inside

1516 2418 11.5374 expand

1517 2419 11.5374 reflect

1518 2421 11.5374 contract inside

1519 2423 11.5374 contract inside

1520 2424 11.5374 reflect

1521 2425 11.5374 reflect

1522 2426 11.5374 reflect

1523 2428 11.5372 expand

1524 2429 11.5372 reflect

1525 2431 11.5372 contract inside

1526 2432 11.5372 reflect

1527 2433 11.5372 reflect

1528 2434 11.5372 reflect

1529 2436 11.5369 expand

1530 2437 11.5369 reflect

1531 2438 11.5369 reflect

1532 2439 11.5369 reflect

1533 2441 11.5365 expand

1534 2442 11.5365 reflect

1535 2443 11.5365 reflect

1536 2444 11.5365 reflect

1537 2446 11.536 expand

1538 2447 11.536 reflect

1539 2448 11.536 reflect

1540 2450 11.536 reflect

1541 2452 11.536 reflect

1542 2454 11.5358 reflect

1543 2455 11.5358 reflect

1544 2457 11.5352 expand

1545 2458 11.5352 reflect

1546 2459 11.5352 reflect

1547 2460 11.5352 reflect

1548 2461 11.5352 reflect

1549 2463 11.5347 expand

1550 2465 11.5347 contract inside

1551 2467 11.5347 contract inside

1552 2479 11.5347 shrink

1553 2491 11.5347 shrink

1554 2492 11.5347 reflect

1555 2494 11.5347 contract inside

1556 2495 11.5347 reflect

1557 2497 11.5347 contract inside

1558 2498 11.5347 reflect

1559 2500 11.5345 expand

Exiting: Maximum number of function evaluations has been exceeded

- increase MaxFunEvals option.

Current function value: 11.534477

FMINSEARCH terminated.

Columns 1 through 10

**x=[45.4147,1.5696,1.8489,1.0385,-0.9685,-0.0463,3.5193,1.8689,1.3038,-0.0008];**

fval = 11.5345;

exitflag =0;

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

Caculation finished and the elapsedTime= 90.5006hours

P\_asterisk =6.9607; L =1.0002; delta =1.6715e-004; penaltyfun1 =0.3343;

penaltyfun2 =4.5714; AR =2.5807; Re =126.7144; penaltyfun5 =0;

obj\_function =11.8665;

Elapsed time is 49.247940 seconds.

Exiting: Maximum number of function evaluations has been exceeded

- increase MaxFunEvals option.

Current function value: 7.026274

FMINSEARCH terminated.

Columns 1 through 10

**x =[45.4271,1.5679,1.8515,1.0364,-0.9666,-0.0470,3.5258,1.8657,1.3081,0.0122];**

**fval =7.0263;**

x =[45.4271,1.5679,1.8515,1.0364,-0.9666,-0.0470,3.5258,1.8657,1.3081,0.0122];

fval =7.0263;

exitflag =

problemtype: 'unconstrained'

rngstate: [1x1 struct]

generations: 10

funccount: 1600

message: [1x227 char]

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

Caculation finished and the elapsedTime= 10.5578hours

P\_asterisk =7.0267; L =1.0000; delta =2.6792e-005; penaltyfun1 =0.0536;

penaltyfun2 =0; AR =2.5909; Re =126.6284; penaltyfun5 =0;

obj\_function =7.0802;

Elapsed time is 52.266401 seconds.