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

Best Mean Stall

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

1 200 335.6 8283 0

2 300 335.6 8088 1

3 400 335.6 9322 2

4 500 335.6 7249 3

5 600 335.6 7190 4

6 700 335.6 5.723e+006 5

7 800 335.6 9.061e+004 6

8 900 335.6 6169 7

9 1000 335.6 6468 8

10 1100 335.6 7962 9

11 1200 335.6 4888 10

12 1300 335.6 7139 11

13 1400 335.6 4502 12

14 1500 335.6 4293 13

15 1600 335.6 4723 14

16 1700 312.6 4471 0

17 1800 312.6 5101 1

18 1900 301.7 1.367e+005 0

19 2000 301.7 7476 1

20 2100 145 4055 0

21 2200 145 8753 1

22 2300 145 3067 2

23 2400 145 3213 3

24 2500 40.24 3265 0

25 2600 40.24 1.336e+004 1

26 2700 40.24 2830 2

27 2800 40.24 2478 3

28 2900 40.24 2941 4

29 3000 21.14 2746 0

30 3100 18.56 2645 0

31 3200 18.56 2585 1

32 3300 18.56 2444 2

33 3400 18.56 2350 3

34 3500 18.56 2143 4

35 3600 18.56 1731 5

36 3700 17.58 1578 0

37 3800 17.58 1348 1

38 3900 17.58 1120 2

39 4000 17.58 1029 3

40 4100 17.58 1037 4

41 4200 17.58 1071 5

42 4300 17.58 843.2 6

43 4400 17.58 704.2 7

44 4500 17.58 661.4 8

45 4600 17.58 453.9 9

46 4700 17.58 418.7 10

47 4800 17.58 332.5 11

48 4900 17.58 240.3 12

49 5000 17.58 156.6 13

**50 5100 17.58 105.6 14**

**Optimization terminated: maximum number of generations exceeded.**

**Switching to the hybrid optimization algorithm (FMINSEARCH).**

Iteration Func-count min f(x) Procedure

0 1 17.5826

1 11 17.5826 initial simplex

2 12 17.5826 reflect

3 13 17.5826 reflect

4 15 17.5826 contract outside

5 16 17.5826 reflect

6 18 17.5826 contract inside

7 19 17.5826 reflect

8 21 17.5826 contract inside

9 23 17.5826 contract inside

10 25 17.5826 contract inside

11 27 17.5826 contract inside

12 29 17.5826 contract inside

13 30 17.5826 reflect

14 32 17.5826 contract inside

15 34 17.5826 contract inside

16 36 17.5826 contract inside

17 38 17.5826 contract inside

18 40 17.5826 contract inside

19 42 17.5826 contract inside

20 44 17.5826 contract inside

21 46 17.5826 contract inside

22 48 17.5826 contract outside

23 50 17.5826 contract inside

24 52 17.5826 contract inside

25 54 17.5826 contract inside

26 56 17.5826 contract inside

27 57 17.5826 reflect

28 59 17.5826 contract inside

29 61 17.5826 contract inside

30 63 17.5826 contract inside

31 65 17.5826 contract inside

32 67 17.5826 contract inside

33 69 17.5826 contract inside

34 71 17.5826 contract outside

35 73 17.5826 contract inside

36 75 17.5826 contract inside

37 77 17.5826 contract inside

38 79 17.5826 contract inside

39 80 17.5826 reflect

40 82 17.5826 contract inside

41 84 17.5826 contract inside

42 86 17.5826 contract inside

43 88 17.5826 contract inside

44 90 17.5826 contract inside

45 92 17.5826 contract inside

46 93 17.5826 reflect

47 95 17.5826 contract inside

48 97 17.5826 contract inside

49 99 17.5826 contract inside

50 101 17.5826 contract inside

51 103 17.5826 contract inside

52 105 17.5826 contract inside

53 106 17.5826 reflect

54 108 17.5826 contract inside

55 110 17.5826 contract outside

56 112 17.4849 contract inside

57 114 17.4849 contract inside

58 116 17.4648 contract inside

59 118 17.4445 contract inside

60 120 17.4445 contract inside

61 122 17.2993 reflect

62 124 17.2993 contract inside

63 126 17.2993 contract inside

64 127 17.2993 reflect

65 129 17.2993 contract inside

66 131 16.693 expand

67 133 16.693 contract inside

68 135 16.693 contract inside

69 136 16.693 reflect

70 137 16.693 reflect

71 138 16.693 reflect

72 139 16.693 reflect

73 141 16.693 contract inside

74 142 16.693 reflect

75 143 16.693 reflect

76 144 16.693 reflect

77 146 16.693 contract inside

78 147 16.693 reflect

79 149 16.6385 expand

80 150 16.6385 reflect

81 152 16.5358 reflect

82 154 16.5358 contract inside

83 155 16.5358 reflect

84 156 16.5358 reflect

85 157 16.5358 reflect

86 158 16.5358 reflect

87 159 16.5358 reflect

88 161 16.4775 reflect

89 163 16.4775 contract inside

90 165 16.4775 contract inside

91 167 16.3445 reflect

92 169 16.3445 contract inside

93 171 16.3445 contract inside

94 172 16.3445 reflect

95 174 16.3445 contract outside

96 175 16.3445 reflect

97 177 16.3445 contract inside

98 179 16.3226 reflect

99 180 16.3226 reflect

100 181 16.3226 reflect

101 183 16.3226 contract inside

102 184 16.3226 reflect

103 186 16.3226 contract inside

104 188 16.2485 expand

105 189 16.2485 reflect

106 190 16.2485 reflect

107 192 16.2485 contract inside

108 193 16.2485 reflect

109 195 16.2485 contract outside

110 196 16.2485 reflect

111 198 16.2425 reflect

112 199 16.2425 reflect

113 201 16.2425 contract inside

114 203 16.1528 reflect

115 204 16.1528 reflect

116 205 16.1528 reflect

117 206 16.1528 reflect

118 208 16.1528 contract inside

119 210 16.0089 expand

120 212 16.0089 contract inside

121 214 16.0089 contract inside

122 215 16.0089 reflect

123 216 16.0089 reflect

124 217 16.0089 reflect

125 218 16.0089 reflect

126 220 16.0089 contract inside

127 221 16.0089 reflect

128 223 16.0057 reflect

129 225 15.9998 reflect

130 227 15.9998 contract inside

131 229 15.9454 reflect

132 230 15.9454 reflect

133 231 15.9454 reflect

134 232 15.9454 reflect

135 233 15.9454 reflect

136 235 15.907 expand

137 237 15.8726 reflect

138 238 15.8726 reflect

139 239 15.8726 reflect

140 241 15.8726 contract inside

141 242 15.8726 reflect

142 244 15.7701 expand

143 245 15.7701 reflect

144 246 15.7701 reflect

145 248 15.728 reflect

146 250 15.6186 expand

147 252 15.6186 contract inside

148 254 15.6186 contract outside

149 255 15.6186 reflect

150 256 15.6186 reflect

151 257 15.6186 reflect

152 258 15.6186 reflect

153 259 15.6186 reflect

154 260 15.6186 reflect

155 262 15.6186 contract inside

156 263 15.6186 reflect

157 265 15.5847 expand

158 267 15.4381 expand

159 269 15.4381 contract inside

160 270 15.4381 reflect

161 271 15.4381 reflect

162 272 15.4381 reflect

163 274 15.4381 contract outside

164 275 15.4381 reflect

165 277 15.3336 expand

166 278 15.3336 reflect

167 279 15.3336 reflect

168 280 15.3336 reflect

169 281 15.3336 reflect

170 282 15.3336 reflect

171 283 15.3336 reflect

172 284 15.3336 reflect

173 285 15.3336 reflect

174 286 15.3336 reflect

175 288 15.3336 contract inside

176 290 15.3336 contract outside

177 292 15.3336 contract inside

178 293 15.3336 reflect

179 294 15.3336 reflect

180 295 15.3336 reflect

181 296 15.3336 reflect

182 298 15.3336 contract inside

183 300 15.2622 reflect

184 301 15.2622 reflect

185 303 15.2622 contract outside

186 304 15.2622 reflect

187 305 15.2622 reflect

188 306 15.2622 reflect

189 307 15.2622 reflect

190 308 15.2622 reflect

191 310 15.1469 expand

192 311 15.1469 reflect

193 313 15.1469 contract inside

194 314 15.1469 reflect

195 316 15.1469 contract inside

196 318 15.1469 contract inside

197 320 15.1469 contract outside

198 321 15.1469 reflect

199 322 15.1469 reflect

200 324 15.1469 contract inside

201 325 15.1469 reflect

202 327 15.1469 contract inside

203 328 15.1469 reflect

204 329 15.1469 reflect

205 330 15.1469 reflect

206 331 15.1469 reflect

207 333 15.1469 contract inside

208 335 15.1067 reflect

209 337 15.0981 reflect

210 338 15.0981 reflect

211 339 15.0981 reflect

212 341 15.0981 contract outside

213 343 15.0447 expand

214 345 14.995 expand

215 346 14.995 reflect

216 348 14.9811 reflect

217 349 14.9811 reflect

218 350 14.9811 reflect

219 351 14.9811 reflect

220 353 14.9471 expand

221 354 14.9471 reflect

222 356 14.9471 contract inside

223 358 14.8565 expand

224 360 14.8565 contract inside

225 361 14.8565 reflect

226 362 14.8565 reflect

227 363 14.8565 reflect

228 364 14.8565 reflect

229 365 14.8565 reflect

230 366 14.8565 reflect

231 368 14.8486 reflect

232 369 14.8486 reflect

233 370 14.8486 reflect

234 371 14.8486 reflect

235 373 14.8058 contract inside

236 375 14.8046 contract inside

237 377 14.7354 reflect

238 378 14.7354 reflect

239 380 14.6702 expand

240 381 14.6702 reflect

241 382 14.6702 reflect

242 384 14.6702 contract inside

243 385 14.6702 reflect

244 387 14.6702 contract inside

245 389 14.6354 expand

246 391 14.6354 contract inside

247 392 14.6354 reflect

248 393 14.6354 reflect

249 394 14.6354 reflect

250 395 14.6354 reflect

251 396 14.6354 reflect

252 398 14.5688 reflect

253 400 14.5451 reflect

254 401 14.5451 reflect

255 402 14.5451 reflect

256 404 14.5451 contract inside

257 406 14.4456 expand

258 408 14.4456 contract inside

259 409 14.4456 reflect

260 410 14.4456 reflect

261 411 14.4456 reflect

262 412 14.4456 reflect

263 413 14.4456 reflect

264 414 14.4456 reflect

265 416 14.4456 contract outside

266 417 14.4456 reflect

267 418 14.4456 reflect

268 420 14.4229 reflect

269 422 14.3646 expand

270 423 14.3646 reflect

271 425 14.3143 expand

272 427 14.2482 expand

273 428 14.2482 reflect

274 429 14.2482 reflect

275 430 14.2482 reflect

276 432 14.2482 contract inside

277 433 14.2482 reflect

278 434 14.2482 reflect

279 435 14.2482 reflect

280 436 14.2482 reflect

281 437 14.2482 reflect

282 438 14.2482 reflect

283 440 14.1773 expand

284 442 14.134 reflect

285 444 14.134 contract inside

286 446 14.134 contract inside

287 447 14.134 reflect

288 449 14.0609 expand

289 450 14.0609 reflect

290 452 14.0344 expand

291 453 14.0344 reflect

292 454 14.0344 reflect

293 455 14.0344 reflect

294 457 13.9286 expand

295 458 13.9286 reflect

296 459 13.9286 reflect

297 460 13.9286 reflect

298 462 13.8489 expand

299 464 13.8489 contract inside

300 465 13.8489 reflect

301 466 13.8489 reflect

302 468 13.8489 contract outside

303 470 13.8489 contract inside

304 471 13.8489 reflect

305 473 13.8489 contract inside

306 475 13.7655 expand

307 476 13.7655 reflect

308 478 13.7655 contract outside

309 479 13.7655 reflect

310 480 13.7655 reflect

311 482 13.6836 expand

312 484 13.6836 contract inside

313 485 13.6836 reflect

314 486 13.6836 reflect

315 488 13.6814 reflect

316 489 13.6814 reflect

317 491 13.6814 contract outside

318 493 13.6814 contract inside

319 494 13.6814 reflect

320 495 13.6814 reflect

321 496 13.6814 reflect

322 498 13.5255 expand

323 499 13.5255 reflect

324 501 13.5255 contract inside

325 502 13.5255 reflect

326 503 13.5255 reflect

327 505 13.5213 reflect

328 507 13.5213 contract outside

329 509 13.5213 contract inside

330 510 13.5213 reflect

331 512 13.5213 contract inside

332 513 13.5213 reflect

333 515 13.5213 contract inside

334 517 13.4153 expand

335 518 13.4153 reflect

336 520 13.4153 contract inside

337 521 13.4153 reflect

338 523 13.4153 contract inside

339 524 13.4153 reflect

340 525 13.4153 reflect

341 527 13.4153 contract inside

342 529 13.4153 contract inside

343 531 13.4153 contract inside

344 532 13.4153 reflect

345 533 13.4153 reflect

346 534 13.4153 reflect

347 536 13.3005 expand

348 538 13.3005 contract inside

349 539 13.3005 reflect

350 540 13.3005 reflect

351 541 13.3005 reflect

352 543 13.3005 contract inside

353 544 13.3005 reflect

354 546 13.3005 contract inside

355 548 13.2246 expand

356 550 13.2246 contract inside

357 551 13.2246 reflect

358 553 13.2246 contract outside

359 554 13.2246 reflect

360 555 13.2246 reflect

361 556 13.2246 reflect

362 557 13.2246 reflect

363 558 13.2246 reflect

364 560 13.2223 reflect

365 561 13.2223 reflect

366 563 13.2223 contract inside

367 565 13.2223 contract inside

368 567 13.2223 contract outside

369 569 13.1547 expand

370 570 13.1547 reflect

371 571 13.1547 reflect

372 573 13.1547 contract inside

373 574 13.1547 reflect

374 576 13.1547 contract inside

375 578 13.1134 expand

376 579 13.1134 reflect

377 580 13.1134 reflect

378 581 13.1134 reflect

379 583 13.1134 contract inside

380 584 13.1134 reflect

381 585 13.1134 reflect

382 587 13.1134 contract inside

383 588 13.1134 reflect

384 589 13.1134 reflect

385 591 13.0999 reflect

386 592 13.0999 reflect

387 594 13.0417 expand

388 596 13.0417 contract inside

389 597 13.0417 reflect

390 598 13.0417 reflect

391 599 13.0417 reflect

392 601 13.0417 contract inside

393 602 13.0417 reflect

394 604 13.0417 contract inside

395 606 13.0053 expand

396 607 13.0053 reflect

397 609 13.0053 contract inside

398 611 13.0053 contract outside

399 612 13.0053 reflect

400 613 13.0053 reflect

401 615 13.0053 contract inside

402 616 13.0053 reflect

403 617 13.0053 reflect

404 618 13.0053 reflect

405 620 12.9787 expand

406 621 12.9787 reflect

407 623 12.9248 expand

408 624 12.9248 reflect

409 625 12.9248 reflect

410 626 12.9248 reflect

411 628 12.9248 contract inside

412 629 12.9248 reflect

413 631 12.8803 expand

414 632 12.8803 reflect

415 634 12.879 reflect

416 636 12.879 contract inside

417 638 12.8763 reflect

418 640 12.8763 contract inside

419 641 12.8763 reflect

420 643 12.8763 contract inside

421 644 12.8763 reflect

422 646 12.8368 expand

423 647 12.8368 reflect

424 649 12.8368 contract inside

425 651 12.8368 contract inside

426 653 12.8368 contract inside

427 655 12.8368 contract inside

428 657 12.8368 contract outside

429 659 12.8368 contract inside

430 661 12.8368 contract inside

431 663 12.8368 contract inside

432 664 12.8368 reflect

433 665 12.8368 reflect

434 667 12.8368 contract inside

435 668 12.8368 reflect

436 669 12.8368 reflect

437 670 12.8368 reflect

438 671 12.8368 reflect

439 673 12.8368 contract inside

440 675 12.8368 contract inside

441 676 12.8368 reflect

442 678 12.8368 contract inside

443 680 12.8368 contract inside

444 681 12.8368 reflect

445 682 12.8368 reflect

446 683 12.8368 reflect

447 685 12.8368 contract inside

448 686 12.8368 reflect

449 688 12.8368 contract inside

450 689 12.8368 reflect

451 690 12.8368 reflect

452 692 12.8368 contract inside

453 694 12.8368 contract inside

454 696 12.8368 contract inside

455 698 12.8368 contract inside

456 700 12.8368 contract inside

457 702 12.8368 contract inside

458 704 12.8368 contract inside

459 706 12.8368 contract inside

460 707 12.8368 reflect

461 708 12.8368 reflect

462 710 12.8368 contract inside

463 712 12.8368 contract inside

464 714 12.8368 contract inside

465 716 12.8368 contract inside

466 718 12.8368 contract inside

467 720 12.8368 contract inside

468 721 12.8368 reflect

469 723 12.8368 contract inside

470 725 12.8368 contract inside

471 727 12.8368 contract inside

472 729 12.8368 contract inside

473 731 12.8358 reflect

474 733 12.8358 contract inside

475 734 12.8358 reflect

476 735 12.8358 reflect

477 737 12.8358 contract inside

478 739 12.8358 contract inside

479 740 12.8358 reflect

480 742 12.8358 contract inside

481 744 12.8358 contract inside

482 745 12.8358 reflect

483 747 12.8349 expand

484 749 12.8349 contract inside

485 751 12.8349 contract inside

486 752 12.8349 reflect

487 754 12.8348 reflect

488 756 12.8348 contract inside

489 758 12.8348 contract inside

490 760 12.8348 contract inside

491 762 12.8335 reflect

492 764 12.8335 contract inside

493 766 12.8335 contract outside

494 767 12.8335 reflect

495 769 12.8335 contract inside

496 771 12.8335 contract outside

497 772 12.8335 reflect

498 774 12.8335 contract inside

499 775 12.8335 reflect

500 776 12.8335 reflect

501 777 12.8335 reflect

502 778 12.8335 reflect

503 780 12.8335 contract inside

504 782 12.8331 expand

505 783 12.8331 reflect

506 785 12.831 expand

507 787 12.831 contract inside

508 788 12.831 reflect

509 789 12.831 reflect

510 791 12.831 contract inside

511 792 12.831 reflect

512 793 12.831 reflect

513 795 12.831 contract inside

514 797 12.831 contract inside

515 799 12.8292 expand

516 801 12.8292 contract inside

517 802 12.8292 reflect

518 803 12.8292 reflect

519 804 12.8292 reflect

520 805 12.8292 reflect

521 807 12.8271 expand

522 808 12.8271 reflect

523 809 12.8271 reflect

524 810 12.8271 reflect

525 812 12.8256 expand

526 813 12.8256 reflect

527 815 12.8253 reflect

528 817 12.8253 contract inside

529 818 12.8253 reflect

530 820 12.8245 reflect

531 822 12.822 expand

532 823 12.822 reflect

533 824 12.822 reflect

534 826 12.8192 expand

535 827 12.8192 reflect

536 828 12.8192 reflect

537 830 12.8162 expand

538 831 12.8162 reflect

539 832 12.8162 reflect

540 834 12.8133 expand

541 835 12.8133 reflect

542 836 12.8133 reflect

543 837 12.8133 reflect

544 839 12.8092 expand

545 840 12.8092 reflect

546 841 12.8092 reflect

547 842 12.8092 reflect

548 843 12.8092 reflect

549 844 12.8092 reflect

550 845 12.8092 reflect

551 846 12.8092 reflect

552 848 12.8062 expand

553 849 12.8062 reflect

554 850 12.8062 reflect

555 851 12.8062 reflect

556 853 12.804 expand

557 854 12.804 reflect

558 855 12.804 reflect

559 856 12.804 reflect

560 857 12.804 reflect

561 858 12.804 reflect

562 860 12.804 contract inside

563 862 12.8009 expand

564 863 12.8009 reflect

565 864 12.8009 reflect

566 865 12.8009 reflect

567 867 12.8009 contract inside

568 868 12.8009 reflect

569 869 12.8009 reflect

570 871 12.8009 contract inside

571 872 12.8009 reflect

572 874 12.798 expand

573 876 12.798 contract inside

574 878 12.798 contract inside

575 879 12.798 reflect

576 880 12.798 reflect

577 881 12.798 reflect

578 883 12.7971 reflect

579 884 12.7971 reflect

580 885 12.7971 reflect

581 887 12.7944 expand

582 889 12.7944 contract outside

583 890 12.7944 reflect

584 891 12.7944 reflect

585 893 12.7898 expand

586 894 12.7898 reflect

587 895 12.7898 reflect

588 897 12.7898 contract inside

589 898 12.7898 reflect

590 900 12.7891 reflect

591 901 12.7891 reflect

592 903 12.7851 expand

593 904 12.7851 reflect

594 905 12.7851 reflect

595 906 12.7851 reflect

596 907 12.7851 reflect

597 908 12.7851 reflect

598 910 12.7851 contract inside

599 911 12.7851 reflect

600 913 12.7851 contract inside

601 914 12.7851 reflect

602 916 12.7796 expand

603 918 12.7796 contract inside

604 919 12.7796 reflect

605 920 12.7796 reflect

606 921 12.7796 reflect

607 923 12.7786 reflect

608 924 12.7786 reflect

609 926 12.7782 reflect

610 927 12.7782 reflect

611 929 12.7742 expand

612 930 12.7742 reflect

613 932 12.7742 contract inside

614 933 12.7742 reflect

615 934 12.7742 reflect

616 936 12.7734 reflect

617 938 12.7718 reflect

618 939 12.7718 reflect

619 941 12.7718 contract inside

620 943 12.7702 expand

621 945 12.7702 contract inside

622 946 12.7702 reflect

623 947 12.7702 reflect

624 949 12.7702 contract inside

625 950 12.7702 reflect

626 952 12.77 reflect

627 954 12.7646 expand

628 955 12.7646 reflect

629 956 12.7646 reflect

630 957 12.7646 reflect

631 958 12.7646 reflect

632 959 12.7646 reflect

633 960 12.7646 reflect

634 961 12.7646 reflect

635 962 12.7646 reflect

636 964 12.7638 contract inside

637 966 12.7595 expand

638 967 12.7595 reflect

639 968 12.7595 reflect

640 969 12.7595 reflect

641 970 12.7595 reflect

642 972 12.7595 contract inside

643 974 12.7595 contract inside

644 976 12.7595 contract outside

645 977 12.7595 reflect

646 979 12.7595 contract inside

647 981 12.7595 contract inside

648 983 12.7595 contract outside

649 984 12.7595 reflect

650 985 12.7595 reflect

651 986 12.7595 reflect

652 988 12.7595 contract inside

653 989 12.7595 reflect

654 990 12.7595 reflect

655 992 12.7595 contract inside

656 994 12.7595 contract inside

657 995 12.7595 reflect

658 996 12.7595 reflect

659 998 12.7595 contract inside

660 1000 12.7589 reflect

661 1001 12.7589 reflect

662 1003 12.7589 contract inside

663 1005 12.7589 contract inside

664 1006 12.7589 reflect

665 1008 12.7589 contract inside

666 1010 12.7589 contract inside

667 1011 12.7589 reflect

668 1013 12.7575 expand

669 1014 12.7575 reflect

670 1015 12.7575 reflect

671 1017 12.7575 contract outside

672 1019 12.7575 reflect

673 1021 12.7575 contract inside

674 1022 12.7575 reflect

675 1023 12.7575 reflect

676 1025 12.7575 contract inside

677 1027 12.7575 contract outside

678 1028 12.7575 reflect

679 1029 12.7575 reflect

680 1031 12.7572 reflect

681 1033 12.7572 contract inside

682 1035 12.7567 expand

683 1037 12.7566 reflect

684 1039 12.7566 contract inside

685 1040 12.7566 reflect

686 1041 12.7566 reflect

687 1042 12.7566 reflect

688 1044 12.7563 reflect

689 1045 12.7563 reflect

690 1047 12.7563 contract inside

691 1048 12.7563 reflect

692 1050 12.7563 contract inside

693 1052 12.7557 expand

694 1053 12.7557 reflect

695 1055 12.755 expand

696 1056 12.755 reflect

697 1057 12.755 reflect

698 1058 12.755 reflect

699 1060 12.755 contract inside

700 1061 12.755 reflect

701 1063 12.755 contract inside

702 1064 12.755 reflect

703 1065 12.755 reflect

704 1066 12.755 reflect

705 1068 12.7544 expand

706 1069 12.7544 reflect

707 1070 12.7544 reflect

708 1071 12.7544 reflect

709 1073 12.7533 expand

710 1075 12.7533 contract inside

711 1076 12.7533 reflect

712 1077 12.7533 reflect

713 1078 12.7533 reflect

714 1079 12.7533 reflect

715 1080 12.7533 reflect

716 1082 12.7524 expand

717 1084 12.7524 contract inside

718 1085 12.7524 reflect

719 1086 12.7524 reflect

720 1087 12.7524 reflect

721 1088 12.7524 reflect

722 1090 12.7524 contract inside

723 1091 12.7524 reflect

724 1092 12.7524 reflect

725 1093 12.7524 reflect

726 1094 12.7524 reflect

727 1096 12.7524 contract inside

728 1097 12.7524 reflect

729 1099 12.7522 reflect

730 1101 12.7515 expand

731 1103 12.7515 contract inside

732 1104 12.7515 reflect

733 1105 12.7515 reflect

734 1106 12.7515 reflect

735 1108 12.7515 contract inside

736 1110 12.7515 contract inside

737 1112 12.7513 reflect

738 1113 12.7513 reflect

739 1114 12.7513 reflect

740 1116 12.7513 contract inside

741 1118 12.7512 reflect

742 1120 12.7506 expand

743 1122 12.7497 expand

744 1123 12.7497 reflect

745 1124 12.7497 reflect

746 1126 12.7497 contract inside

747 1127 12.7497 reflect

748 1128 12.7497 reflect

749 1129 12.7497 reflect

750 1130 12.7497 reflect

751 1131 12.7497 reflect

752 1133 12.7497 contract inside

753 1134 12.7497 reflect

754 1135 12.7497 reflect

755 1136 12.7497 reflect

756 1137 12.7497 reflect

757 1139 12.7494 reflect

758 1140 12.7494 reflect

759 1141 12.7494 reflect

760 1142 12.7494 reflect

761 1144 12.7476 expand

762 1145 12.7476 reflect

763 1146 12.7476 reflect

764 1148 12.7476 contract inside

765 1150 12.7476 contract inside

766 1151 12.7476 reflect

767 1152 12.7476 reflect

768 1153 12.7476 reflect

769 1154 12.7476 reflect

770 1155 12.7476 reflect

771 1156 12.7476 reflect

772 1157 12.7476 reflect

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784 1172 12.7454 expand

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792 1183 12.7438 contract inside

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796 1189 12.7438 contract inside

797 1191 12.7427 expand

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1258 1868 12.7395 reflect

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1300 1926 12.7395 reflect

1301 1928 12.7395 contract inside

1302 1929 12.7395 reflect

1303 1931 12.7395 contract outside

1304 1933 12.7395 reflect

1305 1934 12.7395 reflect

1306 1935 12.7395 reflect

1307 1937 12.7395 expand

1308 1939 12.7395 expand

1309 1941 12.7395 expand

1310 1943 12.7395 reflect

1311 1945 12.7395 contract inside

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1315 1950 12.7395 expand

1316 1952 12.7395 contract inside

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1321 1959 12.7395 contract inside

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1325 1964 12.7395 contract inside

1326 1965 12.7395 reflect

1327 1967 12.7395 contract inside

1328 1969 12.7395 contract inside

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1330 1973 12.7395 expand

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1333 1977 12.7395 contract inside

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1341 1990 12.7395 expand

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1343 1993 12.7395 expand

1344 1995 12.7395 contract outside

1345 1996 12.7395 reflect

1346 1998 12.7395 expand

1347 1999 12.7395 reflect

1348 2001 12.7395 contract outside

Exiting: Maximum number of function evaluations has been exceeded

- increase MaxFunEvals option.

Current function value: 12.739477

FMINSEARCH terminated.

**x =[50.6778,1.1762,0.5131,0.8191,2.5339,-1.4619,3.6447,1.8919,1.9353,0.0000];**

**fval =12.7395;**

exitflag =0

output =

problemtype: 'unconstrained'

rngstate: [1x1 struct]

generations: 50

funccount: 7101

message: [1x228 char]

population =

Columns 1 through 8

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

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50.0601 1.2679 0.4010 0.7843 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2674 0.3873 0.7207 2.3762 -1.3308 3.6746 1.7897

50.3672 1.3245 0.2843 0.6212 2.3882 -1.3431 3.6792 1.8063

50.0601 1.2679 0.4010 0.7183 2.3468 -1.3104 3.7585 1.7892

50.0601 1.2392 0.3958 0.7402 2.3840 -1.3597 3.6472 1.7892

50.0187 1.2679 0.4010 0.7435 2.3767 -1.3632 3.6472 1.7875

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0499 1.2679 0.4010 0.7197 2.3767 -1.3726 3.6472 1.7760

50.0601 1.2836 0.4010 0.7360 2.3841 -1.2698 3.6472 1.7768

50.0601 1.2610 0.4186 0.7546 2.3767 -1.4350 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4023 0.7402 2.3715 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7458 2.3767 -1.3308 3.6472 1.7892

50.0838 1.2679 0.4010 0.7207 2.8224 -1.3520 3.6746 1.7892

50.0598 1.2887 0.4010 0.7360 2.3767 -1.3308 3.6876 1.7854

50.0381 1.2555 0.4010 0.7402 2.3767 -1.3273 3.6472 1.8147

50.3509 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0247 1.2679 0.3204 0.7488 2.3371 -1.2587 3.6472 1.7892

50.3509 1.1984 0.4010 0.6265 2.3767 -1.3129 3.6472 1.7892

50.2104 1.3279 0.4010 0.8552 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

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50.0736 1.2679 0.4150 0.7402 2.3767 -1.3603 3.6472 1.7735

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50.0989 1.2783 0.4481 0.6804 2.6369 -1.3380 3.3732 1.7840

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50.3346 1.3943 0.4295 0.7402 2.6155 -1.3308 3.6472 1.7854

50.0187 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2672 0.3217 0.7866 2.3767 -1.3308 3.6472 1.7762

50.0319 1.2679 0.4010 0.7402 2.3467 -1.3308 3.6472 1.7892

50.0604 1.2679 0.4480 0.7402 2.4029 -1.2883 3.6472 1.7820

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0058 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.3498 0.7402 2.3356 -1.4273 3.5331 1.7729

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.1346 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6543 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.3509 1.2437 0.4010 0.8552 2.3767 -1.3308 3.6275 1.8015

49.8703 1.2962 0.4010 0.7402 2.3455 -1.3308 3.6945 1.7892

50.0601 1.2400 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.3509 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

49.9735 1.2860 0.4010 0.6355 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6435 1.7892

50.0601 1.2679 0.4010 0.7402 2.3126 -1.3445 3.6472 1.7892

50.0601 1.2679 0.4010 0.7463 2.3767 -1.3308 3.6042 1.7739

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.3433 1.2679 0.4255 0.7170 2.3826 -1.3308 3.6472 1.8008

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0604 1.2887 0.4010 0.7402 2.4029 -1.2883 3.6876 1.7820

49.8003 1.2790 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2610 0.4010 0.7546 2.5162 -1.3308 3.5958 1.7892

50.0351 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6955 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.1249 1.2679 0.3418 0.7402 2.4839 -1.3259 3.5287 1.7892

50.0601 1.2679 0.4223 0.7402 2.3785 -1.3726 3.6472 1.7892

49.7646 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.8088

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.3348 0.4010 0.7987 2.3767 -1.3308 3.8624 1.7892

50.0394 1.2211 0.4010 0.7069 2.4125 -1.3697 3.6472 1.8016

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7263

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0604 1.2679 0.4010 0.7402 2.4306 -1.3308 3.6472 1.7892

50.0838 1.2679 0.4010 0.7402 2.8224 -1.2677 3.6472 1.7892

49.9604 1.2679 0.4010 0.7633 2.2588 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0861 1.2646 0.4653 0.6269 2.3354 -1.3897 3.6344 1.7568

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

50.0604 1.2679 0.4010 0.7402 2.4306 -1.3308 3.6472 1.7892

50.0546 1.2437 0.3917 0.7577 2.3665 -1.3390 3.6275 1.8015

50.0601 1.2679 0.4010 0.7402 2.3767 -1.3308 3.6472 1.7892

Columns 9 through 10

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0018

1.9606 0.0113

1.8679 0.0202

1.9606 0.0113

1.9606 0.0057

1.9606 0.0113

1.9606 0.0113

2.0173 0.0113

1.9606 0.0492

1.9606 0.0110

1.9606 0.0113

2.0233 0.0113

1.9606 0.0113

1.9606 -0.0793

1.9556 0.0113

1.9606 0.0113

1.9606 0.0085

1.9606 0.0113

1.9606 0.0577

1.9606 0.0113

2.0971 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.7766 0.0113

1.9230 0.0113

1.9098 0.0142

1.9606 0.0113

1.9606 0.0113

1.9606 0.0018

2.0220 -0.0188

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0250

1.9654 -0.0005

2.0496 0.0113

1.9606 0.0113

1.9651 0.0048

1.9214 0.0444

1.9606 0.0113

1.9606 -0.0000

1.9606 0.0251

1.8942 0.0113

1.9606 0.0226

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9842 0.0113

1.9606 -0.0258

2.0751 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0201

1.9606 0.0265

1.9606 0.1199

1.9606 0.0113

1.9606 0.0113

1.9606 -0.0174

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0103

1.9606 0.0113

1.9606 0.2929

2.2394 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0113

1.9606 0.0294

2.0173 0.0113

1.9606 0.0113

1.9606 0.0113

2.0350 0.0113

1.9263 -0.1085

1.9606 0.0113

1.9606 0.0113

2.1944 0.0565

1.9606 0.0113

1.9606 0.0113

1.9536 0.0113

1.9606 0.0113

1.9606 0.0113

1.9877 0.0113

2.0176 -0.1857

1.9606 0.0113

1.9606 0.0113

1.9543 0.0201

1.9606 0.0113

scores =

1.0e+003 \*

0.0176

0.0176

0.0176

0.0176

0.0679

0.0242

0.0536

0.0982

0.0836

0.0305

0.0176

0.0638

0.0410

0.0507

0.0176

0.0985

0.0176

0.5015

0.0669

0.1157

0.0251

0.0406

0.0586

0.3670

0.5906

0.0176

0.0176

0.0176

0.0363

0.1822

0.0348

0.0254

0.0176

0.0246

0.0205

0.2025

0.0216

0.0176

0.0176

0.1552

0.1358

0.1656

0.0604

0.0204

0.3752

0.0176

0.0770

0.0534

0.5073

0.0249

0.0176

0.0176

0.0176

0.0829

0.1702

0.1586

0.0176

0.0219

0.1145

0.0176

0.0308

0.0176

0.0565

0.1326

0.1373

0.0406

0.0176

0.2230

0.0216

0.0180

0.0748

0.0176

0.0209

0.0176

0.0490

0.5398

0.0631

0.0683

0.0176

0.0176

0.1276

0.1031

0.0177

0.0176

0.7243

0.7582

0.0176

0.0176

0.3341

0.0176

0.0218

0.0214

0.0242

0.0176

0.0424

1.1996

0.0176

0.0218

0.0776

0.0176

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

**Caculation finished and the elapsedTime= 39.6488hours**

**x =[50.6778,1.1762,0.5131,0.8191,2.5339,-1.4619,3.6447,1.8919,1.9353,0.0000];**

**P\_asterisk =12.7389; L =0.9999; delta =-9.7756e-005; fval =12.7395;**

**penaltyfun1 =0.1955; penaltyfun2 =0; penaltyfun5 =0; obj\_function =12.9345;**

**以下是精确值：**

**x =[5.0677789e+001 1.1762423e+000 5.1307852e-001 8.1914557e-001 2.5339154e+000 -1.4619157e+000 3.6447180e+000 1.8919010e+000 1.9353045e+000 1.2250774e-007];**

**P\_asterisk =12.7395;L =1.0000delta =-6.0800e-008; AR =2.9494; Re =170.0776;**

**penaltyfun1 =1.2160e-004; penaltyfun2 =0;penaltyfun5 =0; obj\_function =12.7396;**

**Rario\_F\_vertical\_horiz\_aver =1.1413;**

**F\_vertical\_to\_horiz\_rms =0.3608;**

**P\_aero\_aver\_to\_inertia\_aver =14.4771;**

**由以下初始值代入计算而得：**

**x\_start=[50.5894,1.5061,0.3189,0.5494,0.8681,-1.3308,3.4759,1.7892,1.9606,0.0113];% 继续遗传50代+2000代局部搜索的结果**