all object

|  |  |  |
| --- | --- | --- |
| -399.28 | -679.72 | 1090.96 |
| 109.7 | -642.35 | 1086.43 |
| 475.55 | -538.18 | 1090.5 |
| 517.62 | -194.43 | 1090.65 |
| -466.39 | -542.31 | 1091.55 |
| 42.73 | -412.19 | 1090.82 |
| 321.09 | -667.45 | 1083.49 |
| 527.78 | -375.72 | 1092.0 |

all model

|  |  |  |
| --- | --- | --- |
| -9.5975 | 96.3215 | -153.4711 |
| -2.3859 | -5.9182 | -151.6286 |
| 18.3766 | -79.3583 | -148.7698 |
| 87.3915 | -88.0704 | -148.2892 |
| 18.1762 | 109.7568 | -153.585 |
| 43.8954 | 7.3577 | -150.9432 |
| -7.5452 | -48.379 | -151.1187 |
| 50.9073 | -90.0254 | -148.1656 |

Lab input model

|  |  |  |
| --- | --- | --- |
| -2.3859 | -5.9182 | -151.6286 |
| 18.3766 | -79.3583 | -148.7698 |
| 87.3915 | -88.0704 | -148.2892 |
| 18.1762 | 109.7568 | -153.585 |
| -7.5452 | -48.379 | -151.1187 |

Lab input object

|  |  |  |
| --- | --- | --- |
| 109.7 | -642.35 | 1086.43 |
| 475.55 | -538.18 | 1090.5 |
| 517.62 | -194.43 | 1090.65 |
| -466.39 | -542.31 | 1091.55 |
| 321.09 | -667.45 | 1083.49 |

Lab Initial Parameters

|  |
| --- |
| 0.0 |
| 0.0 |
| 89.8928 |
| 4.981 |
| 139.201 |
| -654.1791 |
| 1841.6992 |

Lab Correlation Matrix

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1.0 | -0.3457 | 0.0366 | 0.0 | -0.9053 | 0.3362 | 0.0433 |
| -0.3457 | 1.0 | -0.016 | -0.0 | 0.3186 | -0.9763 | 0.2089 |
| 0.0366 | -0.016 | 1.0 | 0.0 | -0.1242 | 0.0661 | 0.0007 |
| 0.0 | -0.0 | -0.0 | 1.0 | 0.0991 | 0.0464 | 0.8589 |
| -0.9053 | 0.3186 | -0.1242 | 0.0991 | 1.0 | -0.3098 | 0.0474 |
| 0.3362 | -0.9763 | 0.0661 | 0.0464 | -0.3098 | 1.0 | -0.1642 |
| 0.0433 | 0.2089 | 0.0007 | 0.8589 | 0.0474 | -0.1642 | 1.0 |

Lab Redundancy Numbers

|  |  |  |
| --- | --- | --- |
| 0.7714 | 0.7714 | 0.6898 |
| 0.6971 | 0.6969 | 0.6381 |
| 0.5326 | 0.5325 | 0.0624 |
| 0.2491 | 0.2491 | 0.0714 |
| 0.7497 | 0.7497 | 0.5386 |

Lab Parameters

|  |
| --- |
| -1.0363 |
| -1.8319 |
| 89.8198 |
| -4.9776 |
| 93.9113 |
| -606.6588 |
| 333.3713 |

Lab transformed model points

|  |  |  |
| --- | --- | --- |
| 109.8279 | -642.6196 | 1087.7607 |
| 475.2529 | -537.9316 | 1083.4521 |
| 517.5739 | -194.3928 | 1092.8273 |
| -466.3563 | -542.1126 | 1090.356 |
| 321.2717 | -667.6634 | 1088.2239 |

Lab residuals for transformed model points

|  |  |  |
| --- | --- | --- |
| 0.1279 | -0.2696 | 1.3307 |
| -0.2971 | 0.2484 | -7.0479 |
| -0.0461 | 0.0372 | 2.1773 |
| 0.0337 | 0.1974 | -1.194 |
| 0.1817 | -0.2134 | 4.7339 |
| 0.1373 | 0.1932 | 3.2967 |
| 0.1678 | 0.2099 | 4.0005 |

Lab left perspective center

|  |  |  |
| --- | --- | --- |
| 93.9113 | -606.6588 | 333.3713 |

Lab right perspective center

|  |  |  |
| --- | --- | --- |
| 99.649 | -149.1387 | 354.4145 |

Lab relative orientation parameters

|  |  |  |
| --- | --- | --- |
| -0.9724 | 0.251 | -1.7526 |

Lab M\_i\_m\_left

|  |  |  |
| --- | --- | --- |
| 1.0000000000000000000000000000000000000000000000000 | 0 | 0 |
| 0 | 1.0000000000000000000000000000000000000000000000000 | 0 |
| 0 | 0 | 1.0000000000000000000000000000000000000000000000000 |

Lab M\_i\_m\_right

|  |  |  |
| --- | --- | --- |
| 0.9995 | -0.0307 | -0.0039 |
| 0.0306 | 0.9994 | -0.0171 |
| 0.0044 | 0.0170 | 0.9998 |

Lab M\_o\_m

|  |  |  |
| --- | --- | --- |
| 0.0031 | 0.9998 | -0.0180 |
| -0.9995 | 0.0026 | -0.0320 |
| -0.0320 | 0.0181 | 0.9993 |

Lab M\_o\_m.T

|  |  |  |
| --- | --- | --- |
| 0.0031 | -0.9995 | -0.0320 |
| 0.9998 | 0.0026 | 0.0181 |
| -0.0180 | -0.0320 | 0.9993 |

Lab M\_i\_o\_left

|  |  |  |
| --- | --- | --- |
| 0.0031 | -0.9995 | -0.0320 |
| 0.9998 | 0.0026 | 0.0181 |
| -0.0180 | -0.0320 | 0.9993 |

Lab M\_i\_o\_right

|  |  |  |
| --- | --- | --- |
| -0.0274 | -0.9990 | -0.0364 |
| 0.9996 | -0.0275 | 0.0 |
| -0.0010 | -0.0363 | 0.9993 |

Lab extracted angles

|  |  |  |
| --- | --- | --- |
| 1.8352 | -1.0305 | -89.8198 |
| 2.0831 | -0.0573 | -91.5722 |

check points in object

|  |  |  |
| --- | --- | --- |
| -399.0471 | -680.0976 | 1086.5789 |
| 43.0939 | -412.4294 | 1090.5212 |
| 527.8855 | -375.8579 | 1086.5829 |

check points residuals

|  |  |  |
| --- | --- | --- |
| 0.2329 | -0.3776 | -4.3811 |
| 0.3639 | -0.2394 | -0.2988 |
| 0.1055 | -0.1379 | -5.4171 |
| 0.2341 | 0.2516 | 3.3657 |
| 0.2568 | 0.2701 | 4.0261 |

all tie

|  |  |  |
| --- | --- | --- |
| -9.9688 | 14.8164 | -156.2243 |
| 92.0658 | -4.0001 | -154.4931 |
| -10.5394 | -102.5484 | -155.0824 |
| 87.0929 | -88.3482 | -153.1153 |
| -9.4881 | 96.246 | -158.3431 |
| 84.9816 | 102.8444 | -157.5453 |

tie points in object

|  |  |  |
| --- | --- | --- |
| 6.3439 | -681.3422 | 1107.5485 |
| 98.5473 | -173.2011 | 1116.8663 |
| 590.552 | -682.4992 | 1112.3379 |
| 518.5291 | -196.644 | 1116.8109 |
| -399.1092 | -680.3289 | 1110.8376 |
| -433.355 | -210.2969 | 1121.3077 |

Test input model

|  |  |  |
| --- | --- | --- |
| 108.9302 | 92.5787 | -155.7696 |
| 19.5304 | 96.0258 | -156.4878 |
| 71.8751 | 4.9657 | -154.1035 |
| -0.9473 | -7.4078 | -154.806 |
| 9.638 | -96.5329 | -158.0535 |
| 100.4898 | -63.9177 | -154.9389 |

Test input object

|  |  |  |
| --- | --- | --- |
| 7350.27 | 4382.54 | 276.42 |
| 6717.22 | 4626.41 | 280.05 |
| 6869.09 | 3844.56 | 283.11 |
| 6316.06 | 3934.63 | 283.03 |
| 6172.84 | 3269.45 | 248.1 |
| 6905.26 | 3279.84 | 266.47 |

Test Initial Parameters

|  |
| --- |
| 0.0 |
| 0.0 |
| 18.8601 |
| 7.5826 |
| 6341.7188 |
| 3985.2445 |
| 1457.5585 |

Test Correlation Matrix

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1.0 | 0.1915 | 0.0207 | 0.0 | 0.0173 | 0.8157 | -0.0534 |
| 0.1915 | 1.0 | 0.0259 | 0.0 | -0.9239 | 0.5574 | -0.473 |
| 0.0207 | 0.0259 | 1.0 | -0.0 | 0.0122 | 0.2305 | -0.0117 |
| 0.0 | 0.0 | -0.0 | 1.0 | -0.1637 | 0.0412 | 0.7743 |
| 0.0173 | -0.9239 | 0.0122 | -0.1637 | 1.0 | -0.372 | 0.3177 |
| 0.8157 | 0.5574 | 0.2305 | 0.0412 | -0.372 | 1.0 | -0.2043 |
| -0.0534 | -0.473 | -0.0117 | 0.7743 | 0.3177 | -0.2043 | 1.0 |

Test Redundancy Numbers

|  |  |  |
| --- | --- | --- |
| 0.5744 | 0.5743 | 0.3863 |
| 0.6127 | 0.6127 | 0.4002 |
| 0.8235 | 0.8236 | 0.7968 |
| 0.7656 | 0.7655 | 0.5958 |
| 0.5545 | 0.5546 | 0.4261 |
| 0.6688 | 0.6688 | 0.3958 |

Test Parameters

|  |
| --- |
| -0.8241 |
| -0.7177 |
| 18.8911 |
| 7.5856 |
| 6349.5511 |
| 3964.6453 |
| 1458.1142 |

Test transformed model points

|  |  |  |
| --- | --- | --- |
| 7350.2557 | 4382.3354 | 276.4676 |
| 6717.111 | 4626.7169 | 279.8916 |
| 6869.1524 | 3844.4149 | 283.0665 |
| 6316.1039 | 3934.557 | 283.3083 |
| 6172.9073 | 3269.4483 | 247.9493 |
| 6905.2097 | 3279.9575 | 266.4966 |

Test residuals for transformed model points

|  |  |  |
| --- | --- | --- |
| -0.0143 | -0.2046 | 0.0476 |
| -0.109 | 0.3069 | -0.1584 |
| 0.0624 | -0.1451 | -0.0435 |
| 0.0439 | -0.073 | 0.2783 |
| 0.0673 | -0.0017 | -0.1507 |
| -0.0503 | 0.1175 | 0.0266 |
| 0.0579 | 0.1415 | 0.1175 |
| 0.0645 | 0.1714 | 0.1473 |

Test left perspective center

|  |  |  |
| --- | --- | --- |
| 6349.5511 | 3964.6453 | 1458.1142 |

Test right perspective center

|  |  |  |
| --- | --- | --- |
| 7022.3021 | 3774.6249 | 1466.3994 |

Test relative orientation parameters

|  |  |  |
| --- | --- | --- |
| 0.4392 | 1.508 | 3.1575 |

Test M\_i\_m\_left

|  |  |  |
| --- | --- | --- |
| 1.0000000000000000000000000000000000000000000000000 | 0 | 0 |
| 0 | 1.0000000000000000000000000000000000000000000000000 | 0 |
| 0 | 0 | 1.0000000000000000000000000000000000000000000000000 |

Test M\_i\_m\_right

|  |  |  |
| --- | --- | --- |
| 0.9981 | 0.0553 | -0.0259 |
| -0.0551 | 0.9984 | 0.0091 |
| 0.0263 | -0.0077 | 0.9996 |

Test M\_o\_m

|  |  |  |
| --- | --- | --- |
| 0.9461 | 0.3239 | 0.0072 |
| -0.3237 | 0.9460 | -0.0177 |
| -0.0125 | 0.0144 | 0.9998 |

Test M\_o\_m.T

|  |  |  |
| --- | --- | --- |
| 0.9461 | -0.3237 | -0.0125 |
| 0.3239 | 0.9460 | 0.0144 |
| 0.0072 | -0.0177 | 0.9998 |

Test M\_i\_o\_left

|  |  |  |
| --- | --- | --- |
| 0.9461 | -0.3237 | -0.0125 |
| 0.3239 | 0.9460 | 0.0144 |
| 0.0072 | -0.0177 | 0.9998 |

Test M\_i\_o\_right

|  |  |  |
| --- | --- | --- |
| 0.9620 | -0.2704 | -0.0376 |
| 0.2714 | 0.9622 | 0.0242 |
| 0.0296 | -0.0334 | 0.9990 |

Test extracted angles

|  |  |  |
| --- | --- | --- |
| 1.0121 | 0.4122 | -18.8999 |
| 1.9164 | 1.6965 | -15.7533 |