

* * * * * A・H 型 平均 計算 書 * * * * *

交点の平均結果

| | A L | X | Y |
|------|-------------|--------------|-----------|
| 交点 1 | 230-21-25 - | 147541.628 - | 52802.275 |
| 交点 2 | 121-40- 7 - | 147674.199 - | 52794.200 |

多角路線 重量 標準方程式

| | | | |
|--------|-----------|-------------|-----------|
| B-1 GO | S1= 0.141 | A1=S1+S2 | = + 0.279 |
| B-2 GO | S2= 0.138 | C1=S1 | = + 0.141 |
| B-3 GO | S3= 0.062 | B2=S3+S4 | = + 0.202 |
| B-4 GO | S4= 0.140 | -C2=-S3 | = - 0.062 |
| B-5 GO | S5= 0.134 | C3=S1+S3+S5 | = + 0.337 |

| | | | |
|-----|-------------|--------------|-----------|
| 1 | 230-21-24 - | 147541.629 - | 52802.262 |
| -)2 | 230-21-42 - | 147541.629 - | 52802.280 |
| W 1 | - 18 | + 0.000 | + 0.018 |
| 3 | 121-39-58 - | 147674.199 - | 52794.202 |
| -)4 | 121-40-11 - | 147674.197 - | 52794.204 |
| W 2 | - 13 | - 0.002 | + 0.002 |
| 1+5 | 121-40-20 - | 147674.203 - | 52794.179 |
| -)3 | 121-39-58 - | 147674.199 - | 52794.202 |
| W 3 | + 22 | - 0.004 | + 0.023 |

標準方定式の結果

| | |
|-------------------------------------|-----------|
| D 0=(A1B2C3)-(C1**2.B2)-(A1.C2**2)= | + 0.014 |
| K 1=((C2**2)-(B2.C3)) / D 0 | = - 4.619 |
| K 2=(C1.C2) / D 0 | = + 0.629 |
| K 3=(C1.B2) / D 0 | = + 2.048 |
| K 4=((C1**2)-(A1.C3)) / D 0 | = - 5.332 |
| K 5=(-A1.C2) / D 0 | = - 1.244 |
| K 6=(-A1.B2) / D 0 | = - 4.053 |

| | A L | X | Y |
|--------|-----------|----------|----------|
| K1.W1= | + 83.142 | + 0.000 | - 83.142 |
| K2.W2= | - 8.177 | - 1.258 | + 1.258 |
| K3.W3= | + 45.056 | - 8.192 | + 47.104 |
| A = | + 120.021 | - 9.450 | - 34.780 |
| K2.W1= | - 11.322 | + 0.000 | + 11.322 |
| K4.W2= | + 69.316 | + 10.664 | - 10.664 |
| K5.W3= | - 27.368 | + 4.976 | - 28.612 |
| B = | + 30.626 | + 15.640 | - 27.954 |
| K3.W1= | - 36.864 | + 0.000 | + 36.864 |
| K5.W2= | + 16.172 | + 2.488 | - 2.488 |
| K6.W3= | - 89.166 | + 16.212 | - 93.219 |
| C = | - 109.858 | + 18.700 | - 58.843 |

補正量計算

| | (SA) + (SB) + (SC) = | A L | (SA) + (SB) + (SC) = | X | (SA) + (SB) + (SC) = | Y |
|---|----------------------------|---------------------|----------------------------|-------|----------------------------|----|
| | | MM | | MM | | MM |
| 1 | + 16.9 - 15.4 = + 1.0 | - 1.3 | + 2.6 = + 1.0 | - 4.9 | - 8.2 = - 13.0 | |
| 2 | - 16.5 = - 17.0 | + 1.3 | = + 1.0 | + 4.8 | = + 5.0 | |
| 3 | + 1.8 + 6.8 = + 9.0 | + 0.9 - 1.1 = + 0.0 | - 1.7 + 3.6 = + 2.0 | | | |
| 4 | - 4.2 = - 4.0 | - 2.1 = - 2.0 | + 3.9 = + 4.0 | | | |
| 5 | - 14.7 = - 15.0 | + 2.5 = + 3.0 | - 7.8 = - 8.0 | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-1 GO A2 -- B3

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|---------|------------|------------|----------------|-----------|
| A1 | 90-40-33 | 85-29-58 | | | | - 147402.101 - | 52796.342 |
| A2 | + 0 | 176-10-31 | 53.767 | - 0.997773 | + 0.066704 | - 53.647 + | 3.586 |
| | | | | | | + 0.000 - | 0.005 |
| B1 | 185-10-53 | 181-21-24 | 44.063 | - 0.999720 | - 0.023676 | - 147455.748 - | 52792.761 |
| | + 0 | | | | | - 44.051 - | 1.043 |
| | | | | | | + 0.001 - | 0.004 |
| B2 | 190- 4-50 | 191-26-15 | 42.677 | - 0.980142 | - 0.198299 | - 147499.798 - | 52793.808 |
| | + 1 | | | | | - 41.830 - | 8.463 |
| | | | | | | + 0.000 - | 0.004 |
| B3 | 218-55-10 | 230-21-25 | | | | - 147541.628 - | 52802.275 |
| アンテナ | + 0 | | 140.507 | | | | |
| | 144-51-26 | | | | | - 139.528 - | 5.920 |
| | 85-29-58 | | | | | - 147402.101 - | 52796.342 |
| | 230-21-24 | | | | | - 147541.629 - | 52802.262 |
| | 230-21-25 | | | | | - 147541.628 - | 52802.275 |
| | + 1 | | | | | + 0.001 - | 0.013 |

閉合差 = 0.013
精 度 = 1 / 10808

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-2 G0 A13 -- B3

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|-----------|------------|------------|----------------|-----------|
| A14 | 276-51-13 | 176-48-32 | | | | - 147539.091 - | 52939.887 |
| A13 | - 6 | 93-39-39 | 80.019 | - 0.063850 | + 0.997959 | - 5.109 + | 79.856 |
| | | | | | | + 0.001 + | 0.003 |
| B4 | 173-47-30 | | | | | - 147544.199 - | 52860.028 |
| | - 5 | 87-27- 4 | 57.808 | + 0.044472 | + 0.999011 | + 2.571 + | 57.751 |
| | | | | | | + 0.000 + | 0.002 |
| B3 | 322-54-27 | | | | | - 147541.628 - | 52802.275 |
| アンテナ | - 6 | 230-21-25 | 137.827 | | | | |
| | 53-33-10 | | | | | - 2.538 + | 137.607 |
| | 176-48-32 | | | | | - 147539.091 - | 52939.887 |
| | 230-21-42 | | | | | - 147541.629 - | 52802.280 |
| | 230-21-25 | 閉合差 = | 0.005 | | | - 147541.628 - | 52802.275 |
| | - 17 | 精 度 = | 1 / 27565 | | | + 0.001 + | 0.005 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-3 G0 A8 -- B6

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|-----------|------------|------------|--------------|-------------|
| A9 | 91-31-30 | 245-37-40 | | | | - 147732.450 | - 52774.230 |
| A8 | + 3 | 337- 9-13 | 24.513 | + 0.921549 | - 0.388262 | + 22.590 | - 9.517 |
| | | | | | | + 0.000 | + 0.001 |
| B5 | 186-30-18 | 343-39-34 | 37.162 | + 0.959606 | - 0.281346 | + 35.661 | - 10.455 |
| | + 3 | | | | | + 0.000 | + 0.001 |
| B6 | 318- 0-30 | 121-40- 7 | | | | - 147674.199 | - 52794.200 |
| アンテナ | + 3 | | 61.675 | | | | |
| | 236- 2-18 | | | | | + 58.251 | - 19.972 |
| | 245-37-40 | | | | | - 147732.450 | - 52774.230 |
| | 121-39-58 | | | | | - 147674.199 | - 52794.202 |
| | 121-40- 7 | | | | | - 147674.199 | - 52794.200 |
| | + 9 | | | | | + 0.000 | + 0.002 |
| | | 閉合差 = | 0.002 | | | | |
| | | 精 度 = | 1 / 30838 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-4 G0 A14 -- B6

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|---------|------------|------------|----------------|-----------|
| A9 | 276- 2-55 | 157-34-19 | | | | - 147706.326 - | 52930.563 |
| A14 | - 1 | 73-37-13 | 52.949 | + 0.282002 | + 0.959414 | + 14.932 + | 50.800 |
| | | | | | | - 0.001 + | 0.002 |
| B8 | 182-54- 0 | 76-31-12 | 52.130 | + 0.233106 | + 0.972451 | + 12.152 + | 50.694 |
| | - 1 | | | | | + 0.000 + | 0.001 |
| B7 | 185-14-45 | 81-45-56 | 35.228 | + 0.143224 | + 0.989690 | + 5.045 + | 34.865 |
| | - 1 | | | | | - 0.001 + | 0.001 |
| B6 | 219-54-12 | 121-40- 7 | | | | - 147674.199 - | 52794.200 |
| アンテナ | - 1 | | 140.307 | | | | |
| | 324- 5-52 | | | | | + 32.129 + | 136.359 |
| | 157-34-19 | | | | | - 147706.326 - | 52930.563 |
| | 121-40-11 | | | | | - 147674.197 - | 52794.204 |
| | 121-40- 7 | | | | | - 147674.199 - | 52794.200 |
| | - 4 | | | | | - 0.002 + | 0.004 |

閉合差 = 0.004
精 度 = 1 / 35077

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-5 G0 B3 -- B6

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-------------------------|-----------|-----------|------------|------------|------------------------|----------------------|
| アンテナ | | 230-21-25 | | | | | |
| B3 | 301- 6- 8 - 4 | 171-27-29 | 43.288 | - 0.988907 | + 0.148533 | - 147541.628 42.808 | - 52802.275 6.430 |
| | | | | | | + 0.001 | - 0.003 |
| B9 | 194-46-55 - 3 | 186-14-21 | 58.409 | - 0.994077 | - 0.108679 | - 147584.435 58.063 | - 52795.848 6.348 |
| | | | | | | + 0.001 | - 0.003 |
| B10 | 159-35-53 - 3 | 165-50-11 | 32.697 | - 0.969601 | + 0.244692 | - 147642.497 31.703 | - 52802.199 8.001 |
| | | | | | | + 0.001 | - 0.002 |
| B6 | 135-50- 0 - 4 | 121-40- 7 | | | | - 147674.199 | - 52794.200 |
| アンテナ | | | 134.394 | | | | |
| | 251-18-56 | | | | | - 132.574 | + 8.083 |
| | 230-21-25 | | | | | - 147541.628 | - 52802.275 |
| | 121-40-21 | | | | | - 147674.202 | - 52794.192 |
| | 121-40- 7 | | | | | - 147674.199 | - 52794.200 |
| | - 14 | | | | | + 0.003 | - 0.008 |
| | | 閉合差 = | 0.009 | | | | |
| | | 精 度 = | 1 / 14933 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-6 GO A13 -- A14

| 点名 | 觀測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|------------|--------------|----------|----------------|-----------|
| A14 | 319-38-53 | 176-48-32 | | | | - 147539.091 - | 52939.887 |
| A13 | + 0 | 136-27-25 | 67.240 | - 0.724857 + | 0.688899 | - 48.739 + | 46.322 |
| | | | | | | + 0.000 + | 0.000 |
| B11 | 131- 0-40 | 87-28- 5 | 47.780 | + 0.044176 + | 0.999024 | + 2.111 + | 47.733 |
| | | | | | | + 0.000 + | 0.000 |
| B12 | 304-55-10 | 212-23-14 | 68.284 | - 0.844447 - | 0.535638 | - 57.662 - | 36.576 |
| | - 1 | | | | | - 0.001 + | 0.000 |
| B13 | 185- 1-50 | 217-25- 4 | 79.252 | - 0.794226 - | 0.607622 | - 62.944 - | 48.155 |
| | + 0 | | | | | + 0.000 + | 0.000 |
| A14 | 120- 9-15 | 157-34-19 | | | | - 147706.326 - | 52930.563 |
| A9 | + 0 | | 262.556 | | | | |
| | 340-45-48 | | | | | - 167.234 + | 9.324 |
| | 176-48-32 | | | | | - 147539.091 - | 52939.887 |
| | 157-34-20 | | | | | - 147706.325 - | 52930.563 |
| | 157-34-19 | | | | | - 147706.326 - | 52930.563 |
| | - 1 | | | | | - 0.001 + | 0.000 |
| | | 閉合差 = | 0.001 | | | | |
| | | 精 度 = | 1 / 262556 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-7 GO A13 -- A18

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|---------|------------|------------|----------------|-----------|
| A14 | 81-46-43 | 176-48-32 | | | | - 147539.091 - | 52939.887 |
| A13 | + 2 | 258-35-17 | 55.743 | - 0.197862 | - 0.980230 | - 11.029 - | 54.641 |
| | | | | | | - 0.005 + | 0.002 |
| B14 | 188-55- 0 | 267-30-18 | 44.477 | - 0.043532 | - 0.999052 | - 1.936 - | 44.435 |
| | + 1 | | | | | - 0.003 + | 0.001 |
| B15 | 187-18- 0 | 274-48-19 | 67.444 | + 0.083770 | - 0.996485 | + 5.650 - | 67.207 |
| | + 1 | | | | | - 0.006 + | 0.002 |
| A18 | 165-52-32 | 260-40-53 | | | | - 147546.420 - | 53106.165 |
| A19 | + 2 | | 167.664 | | | | |
| | 83-52-15 | | | | | - 7.315 - | 166.283 |
| | 176-48-32 | | | | | - 147539.091 - | 52939.887 |
| | 260-40-47 | | | | | - 147546.406 - | 53106.170 |
| | 260-40-53 | | | | | - 147546.420 - | 53106.165 |
| | + 6 | | | | | - 0.014 + | 0.005 |

閉合差 = 0.015
精 度 = 1 / 11178

* * * * * A・H 型 平均 計算 書 * * * * *

交点の平均結果

| | A L | X | Y |
|------|-------------|--------------|-----------|
| 交点 1 | 271-49-25 - | 147650.912 - | 53098.222 |
| 交点 2 | 13-30-53 - | 147597.022 - | 52987.408 |

多角路線 重量 標準方程式

| | | | | | | | |
|---------|-----------|-------------|-----------|-----|-------------|--------------|-----------|
| B-8 GO | S1= 0.105 | A1=S1+S2 | = + 0.209 | 1 | 271-49-23 - | 147650.912 - | 53098.223 |
| | | | | -)2 | 271-49-23 - | 147650.913 - | 53098.222 |
| B-9 GO | S2= 0.104 | C1=S1 | = + 0.105 | W 1 | + 0 | + 0.001 | - 0.001 |
| B-10 GO | S3= 0.152 | B2=S3+S4 | = + 0.309 | 3 | 13-31- 1 - | 147597.025 - | 52987.405 |
| | | | | -)4 | 13-30-52 - | 147597.017 - | 52987.409 |
| B-11 GO | S4= 0.157 | -C2=-S3 | = - 0.152 | W 2 | + 9 | - 0.008 | + 0.004 |
| B-12 GO | S5= 0.169 | C3=S1+S3+S5 | = + 0.426 | 1+5 | 13-30-44 - | 147597.025 - | 52987.410 |
| | | | | -)3 | 13-31- 1 - | 147597.025 - | 52987.405 |
| | | | | W 3 | - 17 | + 0.000 | - 0.005 |

標準方定式の結果

| | A L | X | Y |
|-------------------------------------|-----------|-----------------|-------------------|
| D 0=(A1B2C3)-(C1**2.B2)-(A1.C2**2)= | + 0.019 | K1.W1= + 0.000 | - 5.630 + 5.630 |
| K 1=((C2**2)-(B2.C3)) / D 0 | = - 5.630 | K2.W2= + 7.452 | - 6.624 + 3.312 |
| K 2=(C1.C2) / D 0 | = + 0.828 | K3.W3= - 28.611 | + 0.000 - 8.415 |
| K 3=(C1.B2) / D 0 | = + 1.683 | A = - 21.159 | - 12.254 + 0.527 |
| K 4=((C1**2)-(A1.C3)) / D 0 | = - 4.047 | K2.W1= + 0.000 | + 0.828 - 0.828 |
| K 5=(-A1.C2) / D 0 | = - 1.648 | K4.W2= - 36.423 | + 32.376 - 16.188 |
| K 6=(-A1.B2) / D 0 | = - 3.350 | K5.W3= + 28.016 | + 0.000 + 8.240 |
| | | B = - 8.407 | + 33.204 - 8.776 |
| | | K3.W1= + 0.000 | + 1.683 - 1.683 |
| | | K5.W2= - 14.832 | + 13.184 - 6.592 |
| | | K6.W3= + 56.950 | + 0.000 + 16.750 |
| | | C = + 42.118 | + 14.867 + 8.475 |

補正量計算

| | (SA) + (SB) + (SC) = | A L | (SA) + (SB) + (SC) = | X | (SA) + (SB) + (SC) = | Y |
|---|----------------------------|---------------|----------------------------|---------------|----------------------------|----|
| | | MM | | MM | | MM |
| 1 | - 2.2 + 4.4 = + 2.0 | - 1.2 | + 1.5 = + 0.0 | + 0.0 | + 0.8 = + 1.0 | |
| 2 | + 2.2 = + 2.0 | + 1.2 | = + 1.0 | - 0.0 | = + 0.0 | |
| 3 | - 1.2 - 6.4 = - 8.0 | + 5.0 | - 2.2 = + 3.0 | - 1.3 | - 1.2 = - 3.0 | |
| 4 | + 1.3 = + 1.0 | - 5.2 | = - 5.0 | + 1.3 | = + 1.0 | |
| 5 | + 7.1 = + 7.0 | + 2.5 = + 3.0 | | + 1.4 = + 1.0 | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-8 GO A18 -- B17

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|------------|------------|------------|----------------|-----------|
| A19 | 274-45-50 | 260-40-53 | | | | - 147546.420 - | 53106.165 |
| A18 | + 1 | 175-26-44 | 54.328 | - 0.996842 | + 0.079406 | - 54.156 + | 4.314 |
| | | | | | | + 0.000 + | 0.001 |
| B16 | 180-25-55 | 175-52-39 | 50.467 | - 0.997413 | + 0.071889 | - 147600.576 - | 53101.850 |
| | + 0 | | | | | - 50.336 + | 3.628 |
| | | | | | | + 0.000 + | 0.000 |
| B17 | 275-56-45 | 271-49-25 | | | | - 147650.912 - | 53098.222 |
| アンテナ | + 1 | | 104.795 | | | | |
| | 11- 8-30 | | | | | - 104.492 + | 7.942 |
| | 260-40-53 | | | | | - 147546.420 - | 53106.165 |
| | 271-49-23 | | | | | - 147650.912 - | 53098.223 |
| | 271-49-25 | 閉合差 = | 0.001 | | | - 147650.912 - | 53098.222 |
| | + 2 | 精 度 = | 1 / 104795 | | | + 0.000 + | 0.001 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-9 G0 A17 -- B17

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|------------------|-----------|------------|------------|------------|-------------------------|----------------|
| A18 | | 355- 0- 5 | | | | - 147754.402 - | 53087.974 |
| A17 | 359-38- 8 + 1 | 354-38-14 | 53.104 | + 0.995623 | - 0.093462 | + 52.872 - + 0.001 + | 4.963 0.001 |
| B18 | 179-24- 5 + 0 | 354- 2-19 | 50.892 | + 0.994592 | - 0.103858 | + 50.617 - + 0.000 + | 5.286 0.000 |
| B17 アンテナ | 97-47- 5 + 1 | 271-49-25 | 103.996 | | | - 147650.912 - | 53098.222 |
| | 276-49-18 | | | | | + 103.489 - | 10.249 |
| | 355- 0- 5 | | | | | - 147754.402 - | 53087.974 |
| | 271-49-23 | | | | | - 147650.913 - | 53098.223 |
| | 271-49-25 + 2 | | | | | - 147650.912 - | 53098.222 |
| | | 閉合差 = | 0.001 | | | + 0.001 + | 0.001 |
| | | 精 度 = | 1 / 103996 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-10 GO A18 -- B21

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-----------|-----------|---------|--------------|----------|----------------|-----------|
| A19 | 199-38-10 | 260-40-53 | | | | - 147546.420 - | 53106.165 |
| A18 | - 2 | 100-19- 1 | 38.933 | - 0.179093 + | 0.983832 | - 6.973 + | 38.304 |
| | | | | | | + 0.001 - | 0.001 |
| B19 | 239-58-48 | 160-17-47 | 49.344 | - 0.941449 + | 0.337155 | - 46.455 + | 16.637 |
| | - 2 | | | | | + 0.001 - | 0.001 |
| B20 | 107-10-18 | 87-28- 3 | 63.881 | + 0.044186 + | 0.999023 | - 2.823 + | 63.819 |
| | - 2 | | | | | + 0.001 - | 0.001 |
| B21 アンテナ | 106- 2-52 | 13-30-53 | 152.158 | | | - 147597.022 - | 52987.408 |
| | - 2 | | | | | | |
| | 112-50- 8 | | | | | - 50.605 + | 118.760 |
| | 260-40-53 | | | | | - 147546.420 - | 53106.165 |
| | 13-31- 1 | | | | | - 147597.025 - | 52987.405 |
| | 13-30-53 | | | | | - 147597.022 - | 52987.408 |
| | - 8 | | | | | + 0.003 - | 0.003 |

閉合差 = 0.004
精 度 = 1 / 38040

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-11 GO A14 -- B21

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-----------|-----------|-----------|------------|------------|----------------|-----------|
| A9 | 201-24- 8 | 157-34-19 | | | | - 147706.326 - | 52930.563 |
| A14 | + 0 | 358-58-27 | 58.169 | + 0.999840 | - 0.017903 | + 58.160 - | 1.041 |
| | | | | | | - 0.002 + | 0.000 |
| B23 | 171-22-28 | 350-20-55 | 51.527 | + 0.985846 | - 0.167653 | - 147648.168 - | 52931.604 |
| | + 0 | | | | | + 50.798 - | 8.639 |
| | | | | | | - 0.001 + | 0.001 |
| B22 | 100- 4-40 | 270-25-36 | 47.167 | + 0.007447 | - 0.999972 | - 147597.371 - | 52940.242 |
| | + 1 | | | | | + 0.351 - | 47.166 |
| | | | | | | - 0.002 + | 0.000 |
| B21 アンテナ | 283- 5-17 | 13-30-53 | 156.863 | | | - 147597.022 - | 52987.408 |
| | + 0 | | | | | | |
| | 215-56-33 | | | | | + 109.309 - | 56.846 |
| | 157-34-19 | | | | | - 147706.326 - | 52930.563 |
| | 13-30-52 | | | | | - 147597.017 - | 52987.409 |
| | 13-30-53 | | | | | - 147597.022 - | 52987.408 |
| | + 1 | | | | | - 0.005 + | 0.001 |
| | | 閉合差 = | 0.005 | | | | |
| | | 精 度 = | 1 / 31373 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-12 GO B17 -- B21

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------------|---------|------------|------------|----------------|-----------|
| アンテナ | 173- 6-13 | 271-49-25 | | | | - 147650.912 - | 53098.222 |
| B17 | + 2 | 84-55-40 | 67.036 | + 0.088411 | + 0.996084 | + 5.927 + | 66.773 |
| | | | | | | + 0.001 + | 0.000 |
| B24 | 182-32-48 | 87-28-30 | 55.497 | + 0.044055 | + 0.999029 | + 2.445 + | 55.443 |
| | + 2 | | | | | + 0.001 + | 0.001 |
| B25 | 78-27-35 | 345-56- 6 | 46.922 | + 0.970021 | - 0.243023 | + 45.515 - | 11.403 |
| | + 1 | | | | | + 0.001 + | 0.000 |
| B21 | 207-34-45 | 13-30-53 | | | | - 147597.022 - | 52987.408 |
| アンテナ | + 2 | | 169.455 | | | | |
| | 101-41-21 | | | | | + 53.887 + | 110.813 |
| | 271-49-25 | | | | | - 147650.912 - | 53098.222 |
| | 13-30-46 | | | | | - 147597.025 - | 52987.409 |
| | 13-30-53 | 閉合差 = 0.003 | | | | - 147597.022 - | 52987.408 |
| | + 7 | 精 度 = 1 / 56485 | | | | + 0.003 + | 0.001 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-13 GO A17 -- A14

| 点名 | 觀測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|---------|------------|------------|----------------|-----------|
| A18 | 48-57-33 | 355- 0- 5 | | | | - 147754.402 - | 53087.974 |
| A17 | + 5 | 43-57-43 | 77.942 | + 0.719801 | + 0.694180 | + 56.103 + | 54.106 |
| | | | | | | + 0.005 + | 0.000 |
| B26 | 233- 8-43 | 97- 6-31 | 53.131 | - 0.123751 | + 0.992313 | - 147698.294 - | 53033.868 |
| | + 5 | | | | | - 6.575 + | 52.723 |
| | | | | | | + 0.004 + | 0.001 |
| B27 | 174-32-50 | 91-39-27 | 50.602 | - 0.028925 | + 0.999582 | - 147704.865 - | 52981.144 |
| | + 6 | | | | | - 1.464 + | 50.581 |
| | | | | | | + 0.003 + | 0.000 |
| A14 | 245-54-47 | 157-34-19 | | | | - 147706.326 - | 52930.563 |
| A9 | + 5 | | 181.675 | | | | |
| | 162-33-53 | | | | | + 48.064 + | 157.410 |
| | 355- 0- 5 | | | | | - 147754.402 - | 53087.974 |
| | 157-33-58 | | | | | - 147706.338 - | 52930.564 |
| | 157-34-19 | | | | | - 147706.326 - | 52930.563 |
| | + 21 | | | | | + 0.012 + | 0.001 |

閉合差 = 0.012
精 度 = 1 / 15140

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-14 G0 A8 -- A9

| 点名 | 觀測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|---------|------------|------------|--------------|-------------|
| A9 | 21-47-18 | 245-37-40 | | | | - 147732.450 | - 52774.230 |
| A8 | - 2 | 267-24-56 | 54.757 | - 0.045092 | - 0.998983 | - 2.469 | - 54.701 |
| | | | | | | + 0.000 | - 0.001 |
| B28 | 167-30-38 | 254-55-32 | 52.577 | - 0.260074 | - 0.965589 | - 147734.919 | - 52828.932 |
| | - 2 | | | | | - 13.674 | - 50.768 |
| | | | | | | + 0.000 | - 0.001 |
| B29 | 128-35-33 | 203-31- 4 | 42.979 | - 0.916936 | - 0.399034 | - 147748.593 | - 52879.701 |
| | - 1 | | | | | - 39.409 | - 17.150 |
| | | | | | | + 0.000 | - 0.001 |
| A9 | 314- 3-17 | 337-34-19 | | | | - 147788.002 | - 52896.852 |
| A14 | - 2 | | 150.313 | | | | |
| | 91-56-46 | | | | | - 55.552 | - 122.619 |
| | 245-37-40 | | | | | - 147732.450 | - 52774.230 |
| | 337-34-26 | | | | | - 147788.002 | - 52896.849 |
| | 337-34-19 | | | | | - 147788.002 | - 52896.852 |
| | - 7 | | | | | + 0.000 | - 0.003 |

閉合差 = 0.003
精 度 = 1 / 50104

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-15 G0 A8 -- A9

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|-----------|------------|------------|--------------|-------------|
| A9 | 358-52-10 | 245-37-40 | | | | - 147732.450 | - 52774.230 |
| A8 | - 5 | 244-29-45 | 38.638 | - 0.430577 | - 0.902554 | - 16.637 | - 34.873 |
| | | | | | | + 0.000 | - 0.002 |
| B30 | 181- 3-40 | 245-33-20 | 53.752 | - 0.413811 | - 0.910363 | - 22.243 | - 48.934 |
| | - 5 | | | | | + 0.000 | - 0.003 |
| B31 | 181-11-53 | 246-45- 7 | 42.238 | - 0.394713 | - 0.918805 | - 16.672 | - 38.808 |
| | - 6 | | | | | + 0.000 | - 0.002 |
| A9 | 270-49-17 | 337-34-19 | | | | - 147788.002 | - 52896.852 |
| A14 | - 5 | | 134.628 | | | | |
| | 91-57- 0 | | | | | - 55.552 | - 122.615 |
| | 245-37-40 | | | | | - 147732.450 | - 52774.230 |
| | 337-34-40 | | | | | - 147788.002 | - 52896.845 |
| | 337-34-19 | 閉合差 = | 0.007 | | | - 147788.002 | - 52896.852 |
| | - 21 | 精 度 = | 1 / 19233 | | | + 0.000 | - 0.007 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-16 G0 A9 -- A17

| 点名 | 觀測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|-----------|--------------|----------|----------------|-----------|
| A14 | 342- 9-35 | 337-34-19 | | | | - 147788.002 - | 52896.852 |
| A9 | - 5 | 319-43-49 | 39.225 | + 0.763010 - | 0.646387 | + 29.929 - | 25.355 |
| | | | | | | - 0.002 - | 0.001 |
| B32 | 130-35-35 | 270-19-19 | 51.968 | + 0.005619 - | 0.999984 | + 0.292 - | 51.967 |
| | - 5 | | | | | - 0.002 - | 0.002 |
| B33 | 182-29-53 | 272-49- 8 | 60.411 | + 0.049179 - | 0.998790 | + 2.971 - | 60.338 |
| | - 4 | | | | | - 0.003 - | 0.002 |
| B34 | 177-37-50 | 270-26-53 | 53.457 | + 0.007820 - | 0.999969 | + 0.418 - | 53.455 |
| | - 5 | | | | | - 0.003 - | 0.002 |
| A17 | 264-33-17 | 355- 0- 5 | | | | - 147754.402 - | 53087.974 |
| A18 | - 5 | | 205.061 | | | | |
| | 17-26-10 | | | | | + 33.610 - | 191.115 |
| | 337-34-19 | | | | | - 147788.002 - | 52896.852 |
| | 355- 0-29 | | | | | - 147754.392 - | 53087.967 |
| | 355- 0- 5 | 閉合差 = | 0.012 | | | - 147754.402 - | 53087.974 |
| | - 24 | 精 度 = | 1 / 17088 | | | - 0.010 - | 0.007 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-17 G0 A9 -- A11

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|---------|------------|------------|----------------|-----------|
| A14 | 268-28-35 | 337-34-19 | | | | - 147788.002 - | 52896.852 |
| A9 | + 0 | 246- 2-54 | 52.228 | - 0.405966 | - 0.913888 | - 21.203 - | 47.731 |
| | | | | | | - 0.001 + | 0.000 |
| B35 | 208-18-25 | 274-21-19 | 62.132 | + 0.075941 | - 0.997112 | + 4.718 - | 61.953 |
| | | | | | | - 0.001 - | 0.001 |
| A11 | 347- 5-47 | 81-27- 6 | | | | - 147804.489 - | 53006.537 |
| A9 | | | 114.360 | | | | |
| | 103-52-47 | | | | | - 16.485 - | 109.684 |
| | 337-34-19 | | | | | - 147788.002 - | 52896.852 |
| | 81-27- 6 | | | | | - 147804.487 - | 53006.536 |
| | 81-27- 6 | | | | | - 147804.489 - | 53006.537 |
| | + 0 | | | | | - 0.002 - | 0.001 |

閉合差 = 0.002
精 度 = 1 / 57180

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-18 G0 A8 -- A9

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|-----------|--------------|----------|----------------|-----------|
| A9 | 264- 9- 8 | 245-37-40 | | | | - 147732.450 - | 52774.230 |
| A8 | - 5 | 149-46-43 | 52.144 | - 0.864087 + | 0.503343 | - 45.057 + | 26.246 |
| | | | | | | - 0.001 + | 0.000 |
| B36 | 282-56- 0 | 252-42-37 | 49.439 | - 0.297204 - | 0.954814 | - 147777.508 - | 52747.984 |
| | - 6 | | | | | - 14.693 - | 47.205 |
| | | | | | | - 0.001 - | 0.001 |
| B37 | 173-21- 0 | 246- 3-32 | 53.767 | - 0.405797 - | 0.913963 | - 147792.202 - | 52795.190 |
| | - 5 | | | | | - 21.819 - | 49.141 |
| | | | | | | - 0.002 + | 0.000 |
| B38 | 230-17-58 | 296-21-24 | 58.613 | + 0.443958 - | 0.896048 | - 147814.023 - | 52844.331 |
| | - 6 | | | | | + 26.022 - | 52.520 |
| | | | | | | - 0.001 - | 0.001 |
| A9 | 221-13- 0 | 337-34-19 | | | | - 147788.002 - | 52896.852 |
| A14 | - 5 | | 213.963 | | | | |
| | 91-57- 6 | | | | | - 55.547 - | 122.620 |
| | 245-37-40 | | | | | - 147732.450 - | 52774.230 |
| | 337-34-46 | | | | | - 147787.997 - | 52896.850 |
| | 337-34-19 | 閉合差 = | 0.005 | | | - 147788.002 - | 52896.852 |
| | - 27 | 精 度 = | 1 / 42793 | | | - 0.005 - | 0.002 |

* * * * X・Y 型 平均 計 算 書 * * * *

交点の平均結果

A L X Y
290-39-38 - 147871.421 - 52974.556

| 路線名 | 路線長 | 重 量 | 方向角 | P * A L | X | P * X | Y | P * Y |
|---------|-----------|------------------|------------|----------------------|-------------|----------------------|----------------------|-------|
| B-19 GO | S1= 0.147 | P1 =1/S1 = 0.681 | 290-39- 47 | 32.007 | -147871.423 | 0.969 | - 52974.561 | 3.106 |
| B-20 GO | S2= 0.108 | P2 =1/S2 = 0.928 | 290-39- 51 | 47.328 | -147871.428 | 1.325 | - 52974.552 | 4.225 |
| B-21 GO | S3= 0.228 | P3 =1/S3 = 0.439 | 290-39- 56 | 24.584 | -147871.420 | 0.623 | - 52974.557 | 2.000 |
| B-22 GO | S4= 0.075 | P4 =1/S4 = 1.330 | 290-39- 19 | 25.270 | -147871.416 | 1.884 | - 52974.555 | 6.058 |
| | | SUM P = 3.378 | | SUM (P*AL) = 129.189 | | SUM (P * X) = 4.801 | SUM (P * Y) = 15.389 | |
| | | | | SUM(P*AL)/SUMP= 38.2 | | SUM(P*X)/SUMP= 1.421 | SUM(P*Y)/SUMP= 4.556 | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-19 G0 A9 -- B41

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|-----------|--------------|----------|----------------|-----------|
| A14 | 182-35- 3 | 337-34-19 | | | | - 147788.002 - | 52896.852 |
| A9 | - 2 | 160- 9-20 | 45.161 | - 0.940618 + | 0.339468 | - 42.479 + | 15.331 |
| | | | | | | + 0.000 + | 0.002 |
| B39 | 265-55- 5 | 246- 4-23 | 45.411 | - 0.405571 - | 0.914063 | - 147830.481 - | 52881.519 |
| | - 2 | | | | | - 18.417 - | 41.509 |
| | | | | | | + 0.001 + | 0.001 |
| B40 | 180-19- 3 | 246-23-23 | 56.239 | - 0.400513 - | 0.916291 | - 147848.897 - | 52923.027 |
| | - 3 | | | | | - 22.524 - | 51.531 |
| | | | | | | + 0.000 + | 0.002 |
| B41 | 224-16-17 | 290-39-38 | | | | - 147871.421 - | 52974.556 |
| アンテナ | - 2 | | 146.811 | | | | |
| | 313- 5-28 | | | | | - 83.420 - | 77.709 |
| | 337-34-19 | | | | | - 147788.002 - | 52896.852 |
| | 290-39-47 | | | | | - 147871.422 - | 52974.561 |
| | 290-39-38 | 閉合差 = | 0.005 | | | - 147871.421 - | 52974.556 |
| | - 9 | 精 度 = | 1 / 29362 | | | + 0.001 + | 0.005 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-20 GO A15 -- B41

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|-----------|------------|------------|--------------|-------------|
| A16 | 62- 3-38 | 245- 2-15 | | | | - 147951.604 | - 52907.746 |
| A15 | - 4 | 307- 5-49 | 58.501 | + 0.603165 | - 0.797616 | + 35.286 | - 46.661 |
| | | | | | | + 0.004 | - 0.002 |
| B42 | 208-44- 8 | | | | | - 147916.314 | - 52954.409 |
| | - 5 | 335-49-52 | 49.203 | + 0.912343 | - 0.409428 | + 44.890 | - 20.145 |
| | | | | | | + 0.003 | - 0.002 |
| B41 | 134-49-50 | | | | | - 147871.421 | - 52974.556 |
| アンテナ | - 4 | 290-39-38 | 107.704 | | | | |
| | 45-37-36 | | | | | + 80.176 | - 66.806 |
| | 245- 2-15 | | | | | - 147951.604 | - 52907.746 |
| | 290-39-51 | | | | | - 147871.428 | - 52974.552 |
| | 290-39-38 | 閉合差 = | 0.008 | | | - 147871.421 | - 52974.556 |
| | - 13 | 精 度 = | 1 / 13463 | | | + 0.007 | - 0.004 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-21 GO A10 -- B41

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-----------|-----------|------------|--------------|----------|----------------|-----------|
| A11 | 110-17-43 | 65-19-28 | | | | - 147867.440 - | 53143.557 |
| A10 | - 3 | 175-37- 8 | 27.923 | - 0.997078 + | 0.076390 | - 27.841 + | 2.133 |
| | | | | | | + 0.000 + | 0.000 |
| B43 | 149-21-20 | 144-58-25 | 46.586 | - 0.818888 + | 0.573954 | - 38.149 + | 26.738 |
| | - 3 | | | | | + 0.000 + | 0.000 |
| B44 | 101-38-48 | 66-37-10 | 53.364 | + 0.396836 + | 0.917889 | + 21.177 + | 48.982 |
| | - 3 | | | | | - 0.001 + | 0.001 |
| B45 | 179-27-25 | 66- 4-32 | 50.995 | + 0.405532 + | 0.914081 | + 20.680 + | 46.614 |
| | - 3 | | | | | + 0.000 + | 0.000 |
| B46 | 179-34-35 | 65-39- 4 | 48.881 | + 0.412292 + | 0.911052 | + 20.153 + | 44.533 |
| | - 3 | | | | | + 0.000 + | 0.000 |
| B41 アンテナ | 45- 0-37 | 290-39-38 | 227.749 | | | - 147871.421 - | 52974.556 |
| | - 3 | | | | | | |
| | 225-20-28 | | | | | - 3.980 + | 169.000 |
| | 65-19-28 | | | | | - 147867.440 - | 53143.557 |
| | 290-39-56 | | | | | - 147871.420 - | 52974.557 |
| | 290-39-38 | 閉合差 = | 0.001 | | | - 147871.421 - | 52974.556 |
| | - 18 | 精 度 = | 1 / 227749 | | | - 0.001 + | 0.001 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-22 GO A11 -- B41

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-----------|-----------|-----------|--------------|----------|----------------|-----------|
| A9 | 84-58-18 | 81-27- 6 | | | | - 147804.489 - | 53006.537 |
| A11 | + 6 | 166-25-30 | 28.800 | - 0.972064 + | 0.234718 | - 27.995 + | 6.760 |
| | | | | | | - 0.002 + | 0.000 |
| B47 | 160-38-10 | 147- 3-47 | 46.388 | - 0.839269 + | 0.543716 | - 38.932 + | 25.222 |
| | | | | | | - 0.003 - | 0.001 |
| B41 アンテナ | 323-35-45 | 290-39-38 | 75.188 | | | - 147871.421 - | 52974.556 |
| | 209-12-13 | | | | | - 66.927 + | 31.982 |
| | 81-27- 6 | | | | | - 147804.489 - | 53006.537 |
| | 290-39-19 | | | | | - 147871.416 - | 52974.555 |
| | 290-39-38 | | | | | - 147871.421 - | 52974.556 |
| | + 19 | | | | | - 0.005 - | 0.001 |
| | | 閉合差 = | 0.005 | | | | |
| | | 精 度 = | 1 / 15038 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-23 G0 A11 -- A10

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------------|---------|------------|------------|----------------|-----------|
| A9 | 138-37-8 | 81-27-6 | | | | - 147804.489 - | 53006.537 |
| A11 | + 10 | 220-4-24 | 67.218 | - 0.765221 | - 0.643768 | - 51.437 - | 43.273 |
| | | | | | | - 0.001 + | 0.001 |
| B48 | 205-58-55 | 246-3-30 | 52.270 | - 0.405806 | - 0.913959 | - 21.211 - | 47.773 |
| | + 11 | | | | | + 0.000 + | 0.000 |
| B49 | 215-51-5 | 281-54-46 | 46.988 | + 0.206422 | - 0.978463 | + 9.699 - | 45.976 |
| | + 11 | | | | | - 0.001 + | 0.001 |
| A10 | 323-24-32 | 65-19-28 | | | | - 147867.440 - | 53143.557 |
| A11 | + 10 | | 166.476 | | | | |
| | 343-51-40 | | | | | - 62.949 - | 137.022 |
| | 81-27-6 | | | | | - 147804.489 - | 53006.537 |
| | 65-18-46 | | | | | - 147867.438 - | 53143.559 |
| | 65-19-28 | 閉合差 = 0.003 | | | | - 147867.440 - | 53143.557 |
| | + 42 | 精 度 = 1 / 55492 | | | | - 0.002 + | 0.002 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-24 GO A11 -- A10

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|-----------|------------|------------|----------------|-----------|
| A9 | 153- 4-58 | 81-27- 6 | | | | - 147804.489 - | 53006.537 |
| A11 | - 2 | 234-32- 2 | 42.259 | - 0.580221 | - 0.814459 | - 24.520 - | 34.418 |
| | | | | | | - 0.002 - | 0.002 |
| B50 | 191-26-28 | | | | | - 147829.011 - | 53040.957 |
| | - 1 | 245-58-29 | 50.259 | - 0.407140 | - 0.913366 | - 20.462 - | 45.905 |
| | | | | | | - 0.002 - | 0.002 |
| B51 | 186-26-40 | | | | | - 147849.475 - | 53086.864 |
| | - 1 | 252-25- 8 | 59.469 | - 0.302056 | - 0.953290 | - 17.963 - | 56.691 |
| | | | | | | - 0.002 - | 0.002 |
| A10 | 352-54-22 | | | | | - 147867.440 - | 53143.557 |
| A11 | - 2 | 65-19-28 | 151.987 | | | | |
| | 343-52-28 | | | | | - 62.945 - | 137.014 |
| | 81-27- 6 | | | | | - 147804.489 - | 53006.537 |
| | 65-19-34 | | | | | - 147867.434 - | 53143.551 |
| | 65-19-28 | 閉合差 = | 0.008 | | | - 147867.440 - | 53143.557 |
| | - 6 | 精 度 = | 1 / 18998 | | | - 0.006 - | 0.006 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-25 GO A11 -- A24

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-------------------|-----------|-----------|------------|------------|--------------|-------------|
| A9 | | 81-27- 6 | | | | - 147804.489 | - 53006.537 |
| A11 | 207-36-18 + 10 | 289- 3-34 | 35.658 | + 0.326549 | - 0.945180 | + 11.644 | - 33.703 |
| | | | | | | + 0.002 | - 0.001 |
| B52 | 153-14-30 + 10 | 262-18-14 | 46.552 | - 0.133919 | - 0.990992 | - 6.234 | - 46.133 |
| | | | | | | + 0.002 | - 0.001 |
| B53 | 170-41-15 + 10 | 252-59-39 | 56.401 | - 0.292469 | - 0.956275 | - 16.496 | - 53.935 |
| | | | | | | + 0.003 | - 0.001 |
| B54 | 171-49-50 + 10 | 244-49-39 | 73.234 | - 0.425345 | - 0.905031 | - 31.150 | - 66.279 |
| | | | | | | + 0.003 | - 0.001 |
| A24 | 295- 5-52 + 10 | 359-55-41 | | | | - 147846.715 | - 53206.591 |
| A25 | | | 211.845 | | | | |
| | 278-27-45 | | | | | - 42.236 | - 200.050 |
| | 81-27- 6 | | | | | - 147804.489 | - 53006.537 |
| | 359-54-51 | | | | | - 147846.725 | - 53206.587 |
| | 359-55-41 | 閉合差 = | 0.011 | | | - 147846.715 | - 53206.591 |
| | + 50 | 精 度 = | 1 / 19259 | | | + 0.010 | - 0.004 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-26 GO A17 -- A25

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------------|---------|------------|------------|--------------|-------------|
| A18 | 275-17-15 | 355- 0- 5 | | | | - 147754.402 | - 53087.974 |
| A17 | - 8 | 270-17-12 | 52.225 | + 0.005003 | - 0.999987 | + 0.261 | - 52.224 |
| | | | | | | + 0.003 | - 0.003 |
| B55 | 191-32-50 | 281-49-54 | 67.963 | + 0.205037 | - 0.978754 | + 13.935 | - 66.519 |
| | - 8 | | | | | + 0.005 | - 0.005 |
| A25 | 78- 5-55 | 179-55-41 | | | | - 147740.198 | - 53206.725 |
| A24 | - 8 | | 120.188 | | | | |
| | 184-56- 0 | | | | | + 14.196 | - 118.743 |
| | 355- 0- 5 | | | | | - 147754.402 | - 53087.974 |
| | 179-56- 5 | | | | | - 147740.206 | - 53206.717 |
| | 179-55-41 | 閉合差 = 0.011 | | | | - 147740.198 | - 53206.725 |
| | - 24 | 精 度 = 1 / 10926 | | | | + 0.008 | - 0.008 |

* * * * X・Y 型 平均 計算 書 * * * *

交点の平均結果

A L X Y
332-13- 7 - 147937.015 - 53280.777

| 路線名 | 路線長 | 重 量 | 方向角 | P * A L | X | P * X | Y | P * Y |
|---------|-----------|------------------|------------|----------------------|-------------|----------------------|-------------|----------------------|
| B-27 GO | S1= 0.305 | P1 =1/S1 = 0.328 | 332-12- 47 | 15.416 | -147937.029 | 2.305 | - 53280.783 | 0.257 |
| B-28 GO | S2= 0.134 | P2 =1/S2 = 0.745 | 332-12- 93 | 69.285 | -147937.011 | 5.223 | - 53280.778 | 0.580 |
| B-29 GO | S3= 0.154 | P3 =1/S3 = 0.649 | 332-12- 48 | 31.152 | -147937.013 | 4.552 | - 53280.773 | 0.501 |
| | | SUM P = 1.722 | | SUM (P*AL) = 115.853 | | SUM (P * X) = 12.080 | | SUM (P * Y) = 1.338 |
| | | | | SUM(P*AL)/SUMP= 67.2 | | SUM(P*X)/SUMP= 7.015 | | SUM(P*Y)/SUMP= 0.777 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-27 GO A16 -- B61

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|---------|------------|------------|----------------|-----------|
| A15 | 260-59-15 | 65- 2-15 | | | | - 148028.595 - | 53073.136 |
| A16 | + 3 | 326- 1-33 | 50.182 | + 0.829290 | - 0.558819 | + 41.615 - | 28.043 |
| | | | | | | + 0.002 + | 0.001 |
| B56 | 152-17-13 | 298-18-49 | 68.175 | + 0.474297 | - 0.880365 | - 147986.978 - | 53101.178 |
| | + 3 | | | | | + 32.335 - | 60.019 |
| | | | | | | + 0.003 + | 0.001 |
| B57 | 127-42-25 | 246- 1-17 | 39.506 | - 0.406396 | - 0.913697 | - 147954.640 - | 53161.196 |
| | + 3 | | | | | - 16.055 - | 36.097 |
| | | | | | | + 0.002 + | 0.001 |
| B58 | 181-59-38 | 248- 0-57 | 63.015 | - 0.374350 | - 0.927287 | - 147970.693 - | 53197.292 |
| | + 2 | | | | | - 23.590 - | 58.433 |
| | | | | | | + 0.003 + | 0.001 |
| B59 | 300-27-48 | 8-28-48 | 50.871 | + 0.989067 | + 0.147464 | - 147994.280 - | 53255.724 |
| | + 3 | | | | | + 50.315 + | 5347.502 |
| | | | | | | + 0.002 + | 0.001 |
| B60 | 93-33-43 | 282- 2-34 | 33.290 | + 0.208642 | - 0.977992 | - 147943.963 - | 53248.221 |
| | + 3 | | | | | + 6.946 - | 32.557 |
| | | | | | | + 0.002 + | 0.001 |
| B61 | 230-10-30 | 332-13- 7 | | | | - 147937.015 - | 53280.777 |
| アンテナ | | | 305.039 | | | | |
| | 267-10-32 | | | | | + 91.566 - | 207.647 |
| | 65- 2-15 | | | | | - 148028.595 - | 53073.136 |
| | 332-12-47 | | | | | - 147937.029 - | 53280.783 |
| | 332-13- 7 | | | | | - 147937.015 - | 53280.777 |
| | + 20 | | | | | + 0.014 + | 0.006 |

閉合差 = 0.015
精 度 = 1 / 20336

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-28 GO A31 -- B61

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|---------|------------|------------|----------------|-----------|
| A32 | 222-47-10 | 224-28-33 | | | | - 147972.301 - | 53408.167 |
| A31 | - 6 | 87-15-37 | 49.923 | + 0.047799 | + 0.998857 | + 2.386 + | 49.866 |
| | | | | | | - 0.001 + | 0.000 |
| B63 | 158-48- 3 | 66- 3-33 | 43.592 | + 0.405793 | + 0.913965 | + 17.689 + | 39.842 |
| | - 7 | | | | | - 0.001 + | 0.001 |
| B62 | 181-57-20 | 68- 0-46 | 40.637 | + 0.374400 | + 0.927267 | + 15.214 + | 37.681 |
| | - 7 | | | | | - 0.001 + | 0.000 |
| B61 | 84-12-27 | 332-13- 7 | | | | - 147937.015 - | 53280.777 |
| アンテナ | - 6 | | 134.152 | | | | |
| | 107-45- 0 | | | | | + 35.289 + | 127.389 |
| | 224-28-33 | | | | | - 147972.301 - | 53408.167 |
| | 332-13-33 | | | | | - 147937.012 - | 53280.778 |
| | 332-13- 7 | | | | | - 147937.015 - | 53280.777 |
| | - 26 | | | | | - 0.003 + | 0.001 |

閉合差 = 0.003
精 度 = 1 / 44717

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-29 GO A10 -- B61

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|---------|------------|------------|----------------|-----------|
| A11 | 173-25-30 | 65-19-28 | | | | - 147867.440 - | 53143.557 |
| A10 | + 5 | 238-45- 3 | 51.106 | - 0.518761 | - 0.854919 | - 26.512 - | 43.692 |
| | | | | | | - 0.001 - | 0.001 |
| B64 | 187-15- 5 | | | | | - 147893.953 - | 53187.250 |
| | + 5 | 246- 0-13 | 49.288 | - 0.406679 | - 0.913571 | - 20.044 - | 45.028 |
| | | | | | | + 0.000 - | 0.002 |
| B65 | 178-36-20 | | | | | - 147913.997 - | 53232.280 |
| | + 4 | 244-36-37 | 53.681 | - 0.428773 | - 0.903412 | - 23.017 - | 48.496 |
| | | | | | | - 0.001 - | 0.001 |
| B61 | 267-36-25 | | | | | - 147937.015 - | 53280.777 |
| アンテナ | + 5 | 332-13- 7 | 154.075 | | | | |
| | 266-53-20 | | | | | - 69.573 - | 137.216 |
| | 65-19-28 | | | | | - 147867.440 - | 53143.557 |
| | 332-12-48 | | | | | - 147937.013 - | 53280.773 |
| | 332-13- 7 | | | | | - 147937.015 - | 53280.777 |
| | + 19 | | | | | - 0.002 - | 0.004 |

閉合差 = 0.004
精 度 = 1 / 38519

* * * * * A・H 型 平均計算書 * * * * *

交点の平均結果

| | | A L | X | Y |
|----|---|-----------|--------------|-------------|
| 交点 | 1 | 282-26-48 | - 147796.777 | - 53371.622 |
| 交点 | 2 | 194-26-54 | - 147907.241 | - 53355.115 |

多角路線 重量 標準方程式

| | | | | | | | |
|---------|-----------|-------------|-----------|-----|-----------|--------------|-------------|
| B-30 GO | S1= 0.211 | A1=S1+S2 | = + 0.332 | 1 | 282-27-27 | - 147796.783 | - 53371.616 |
| | | | | -)2 | 282-26-22 | - 147796.774 | - 53371.611 |
| B-31 GO | S2= 0.121 | C1=S1 | = + 0.211 | W 1 | + 65 | - 0.009 | - 0.005 |
| B-32 GO | S3= 0.160 | B2=S3+S4 | = + 0.264 | 3 | 194-26-27 | - 147907.253 | - 53355.119 |
| | | | | -)4 | 194-27-16 | - 147907.233 | - 53355.126 |
| B-33 GO | S4= 0.104 | -C2=-S3 | = - 0.160 | W 2 | - 49 | - 0.020 | + 0.007 |
| B-34 GO | S5= 0.112 | C3=S1+S3+S5 | = + 0.483 | 1+5 | 194-27-29 | - 147907.247 | - 53355.095 |
| | | | | -)3 | 194-26-27 | - 147907.253 | - 53355.119 |
| | | | | W 3 | + 62 | + 0.006 | + 0.024 |

標準方程式の結果

| | | A L | X | Y | |
|-------------------------------------|-----------|--------|-----------|-----------|-----------|
| D 0=(A1B2C3)-(C1**2.B2)-(A1.C2**2)= | + 0.022 | K1.W1= | - 299.975 | + 41.535 | + 23.075 |
| K 1=((C2**2)-(B2.C3)) / D 0 | = - 4.615 | K2.W2= | - 74.921 | - 30.580 | + 10.703 |
| K 2=(C1.C2) / D 0 | = + 1.529 | K3.W3= | + 156.426 | + 15.138 | + 60.552 |
| K 3=(C1.B2) / D 0 | = + 2.523 | A = | - 218.470 | + 26.093 | + 94.330 |
| K 4=((C1**2)-(A1.C3)) / D 0 | = - 5.246 | K2.W1= | + 99.385 | - 13.761 | - 7.645 |
| K 5=(-A1.C2) / D 0 | = - 2.406 | K4.W2= | + 257.054 | + 104.920 | - 36.722 |
| K 6=(-A1.B2) / D 0 | = - 3.969 | K5.W3= | - 149.172 | - 14.436 | - 57.744 |
| | | B = | + 207.267 | + 76.723 | - 102.111 |
| | | K3.W1= | + 163.995 | - 22.707 | - 12.615 |
| | | K5.W2= | + 117.894 | + 48.120 | - 16.842 |
| | | K6.W3= | - 246.078 | - 23.814 | - 95.256 |
| | | C = | + 35.811 | + 1.599 | - 124.713 |

補正量計算

| (SA) + (SB) + (SC) = | | A L | (SA) + (SB) + (SC) = | X | (SA) + (SB) + (SC) = | Y |
|----------------------------|--------|----------------|----------------------------|----------------|----------------------------|----------------|
| | | MM | | | MM | MM |
| 1 | - 46.0 | + 7.5 = - 39.0 | + 5.5 | + 0.3 = + 6.0 | + 19.9 | - 26.3 = - 6.0 |
| 2 | + 26.4 | = + 26.0 | - 3.1 | = - 3.0 | - 11.4 | = - 11.0 |
| 3 | + 33.1 | - 5.7 = + 27.0 | + 12.2 | - 0.2 = + 12.0 | - 16.3 | + 19.9 = + 4.0 |
| 4 | - 21.5 | = - 22.0 | - 7.9 | = - 8.0 | + 10.6 | = + 11.0 |
| 5 | + 4.0 | = + 4.0 | + 0.1 | = + 0.0 | - 13.9 | = - 14.0 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-30 GO A24 -- B69

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-----------|-----------|-----------|------------|------------|--------------|-------------|
| A25 | | 359-55-41 | | | | - 147846.715 | - 53206.591 |
| A24 | 4-50- 5 | | | | | + 42.489 | + 3.538 |
| | - 8 | 4-45-38 | 42.636 | + 0.996550 | + 0.082992 | + 0.001 | - 0.001 |
| B66 | 88-54- 8 | | | | | - 147804.225 | - 53203.054 |
| | - 8 | 273-39-38 | 74.652 | + 0.063845 | - 0.997960 | + 4.766 | - 74.500 |
| | | | | | | + 0.002 | - 0.002 |
| B67 | 178- 3-13 | | | | | - 147799.457 | - 53277.556 |
| | - 7 | 271-42-44 | 43.404 | + 0.029879 | - 0.999554 | + 1.297 | - 43.385 |
| | | | | | | + 0.002 | - 0.002 |
| B68 | 179-51- 0 | | | | | - 147798.158 | - 53320.943 |
| | - 8 | 271-33-36 | 50.697 | + 0.027224 | - 0.999629 | + 1.380 | - 50.678 |
| | | | | | | + 0.001 | - 0.001 |
| B69 アンテナ | 190-53-20 | | | | | - 147796.777 | - 53371.622 |
| | - 8 | 282-26-48 | 211.389 | | | | |
| | 282-31-46 | | | | | + 49.932 | - 165.025 |
| | 359-55-41 | | | | | - 147846.715 | - 53206.591 |
| | 282-27-27 | | | | | - 147796.783 | - 53371.616 |
| | 282-26-48 | 閉合差 = | 0.008 | | | - 147796.777 | - 53371.622 |
| | - 39 | 精 度 = | 1 / 26424 | | | + 0.006 | - 0.006 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-31 GO A23 -- B69

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-------------------|-----------|-----------|------------|------------|-------------------------|-----------------|
| A28 | | 275-41- 9 | | | | - 147744.601 - | 53443.266 |
| A23 | 155-16-43 + 6 | 70-57-58 | 27.023 | + 0.326127 | + 0.945326 | + 8.813 + - 0.001 - | 25.546 0.002 |
| B71 | 211-56-58 + 7 | 102-55- 3 | 41.898 | - 0.223548 | + 0.974693 | - 9.366 + - 0.001 - | 40.838 0.004 |
| B70 | 251-15- 0 + 7 | 174-10-10 | 51.888 | - 0.994827 | + 0.101587 | - 51.620 + - 0.001 - | 5.271 0.005 |
| B69 アンテナ | 288-16-32 + 6 | 282-26-48 | 120.809 | | | - 147796.777 - | 53371.622 |
| | 6-45-13 | | | | | - 52.173 + | 71.655 |
| | 275-41- 9 | | | | | - 147744.601 - | 53443.266 |
| | 282-26-22 | | | | | - 147796.774 - | 53371.611 |
| | 282-26-48 + 26 | | | | | - 147796.777 - | 53371.622 |
| | | 閉合差 = | 0.011 | | | - 0.003 - | 0.011 |
| | | 精 度 = | 1 / 10983 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-32 GO A24 -- B74

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-------------------|-----------|---------|------------|------------|---|------------------------------|
| A25 | | 359-55-41 | | | | - 147846.715 - | 53206.591 |
| A24 | 250- 4-50 + 7 | 250- 0-38 | 71.651 | - 0.341847 | - 0.939756 | - 24.494 - + 0.005 + | 67.334 0.002 |
| B72 | 176- 4- 8 + 7 | 246- 4-53 | 40.714 | - 0.405439 | - 0.914122 | - 147871.204 - + 16.507 - + 0.003 + | 53273.923 37.218 0.001 |
| B73 | 179-57-48 + 6 | 246- 2-47 | 48.120 | - 0.405997 | - 0.913874 | - 147887.708 - + 19.537 - + 0.004 + | 53311.140 43.976 0.001 |
| B74 アンテナ | 128-24- 0 + 7 | 194-26-54 | 160.485 | | | - 147907.241 - | 53355.115 |
| | 194-30-46 | | | | | - 60.538 - | 148.528 |
| | 359-55-41 | | | | | - 147846.715 - | 53206.591 |
| | 194-26-27 | | | | | - 147907.253 - | 53355.119 |
| | 194-26-54 + 27 | | | | | - 147907.241 - + 0.012 + | 53355.115 0.004 |

閉合差 = 0.013
精 度 = 1 / 12345

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-33 GO A31 -- B74

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-----------|-----------|----------|------------|------------|----------------|-----------|
| A32 | 129-20-35 | 224-28-33 | | | | - 147972.301 - | 53408.167 |
| A31 | - 7 | 353-49- 1 | 41.421 | + 0.994183 | - 0.107705 | + 41.180 - | 4.461 |
| | | | | | | - 0.003 + | 0.004 |
| | 253-37-33 | | | | | - 147931.124 - | 53412.624 |
| B75 | - 8 | 67-26-26 | 62.267 | + 0.383642 | + 0.923482 | + 23.888 + | 57.502 |
| | | | | | | - 0.005 + | 0.007 |
| | 307- 0-35 | | | | | - 147907.241 - | 53355.115 |
| B74 アンテナ | - 7 | 194-26-54 | 103.688 | | | | |
| | 329-58-43 | | | | | + 65.068 + | 53.041 |
| | 224-28-33 | | | | | - 147972.301 - | 53408.167 |
| | 194-27-16 | | | | | - 147907.233 - | 53355.126 |
| | 194-26-54 | | | | | - 147907.241 - | 53355.115 |
| | - 22 | | | | | - 0.008 + | 0.011 |
| | | 閉合差 = | 0.014 | | | | |
| | | 精 度 = | 1 / 7406 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-34 G0 B69 -- B74

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|----------|------------|------------|----------------|-----------|
| アンテナ | 253-23-55 | 282-26-48 | | | | - 147796.777 - | 53371.622 |
| B69 | + 1 | 175-50-44 | 61.419 | - 0.997372 | + 0.072445 | - 61.258 + | 4.450 |
| | | | | | | + 0.000 - | 0.008 |
| | 170-22-10 | | | | | - 147858.035 - | 53367.180 |
| B76 | + 2 | 166-12-56 | 50.665 | - 0.971199 | + 0.238270 | - 49.206 + | 12.072 |
| | | | | | | + 0.000 - | 0.007 |
| | 208-13-57 | | | | | - 147907.241 - | 53355.115 |
| B74 | + 1 | 194-26-54 | | | | | |
| アンテナ | | | 112.084 | | | | |
| | 272- 0- 2 | | | | | - 110.464 + | 16.522 |
| | 282-26-48 | | | | | - 147796.777 - | 53371.622 |
| | 194-26-50 | | | | | - 147907.241 - | 53355.100 |
| | 194-26-54 | | | | | - 147907.241 - | 53355.115 |
| | + 4 | | | | | + 0.000 - | 0.015 |
| | | 閉合差 = | 0.015 | | | | |
| | | 精 度 = | 1 / 7472 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-35 GO A31 -- A23

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|---------|--------------|----------|----------------|-----------|
| A32 | 131-24-30 | 224-28-33 | | | | - 147972.301 - | 53408.167 |
| A31 | - 2 | 355-53- 1 | 93.050 | + 0.997420 - | 0.071783 | + 92.810 - | 6.679 |
| | | | | | | - 0.004 + | 0.000 |
| B77 | 179-57-25 | 355-50-23 | 35.481 | + 0.997365 - | 0.072547 | + 35.388 - | 2.574 |
| | - 3 | | | | | - 0.002 + | 0.001 |
| B78 | 180- 8-13 | 355-58-34 | 39.894 | + 0.997535 - | 0.070172 | + 39.796 - | 2.799 |
| | - 2 | | | | | - 0.001 + | 0.000 |
| B79 | 162-55-13 | 338-53-44 | 64.009 | + 0.932926 - | 0.360069 | + 59.716 - | 23.048 |
| | - 3 | | | | | - 0.003 + | 0.000 |
| A23 | 116-47-27 | 275-41- 9 | | | | - 147744.601 - | 53443.266 |
| A28 | - 2 | | 232.434 | | | | |
| | 51-12-48 | | | | | + 227.710 - | 35.100 |
| | 224-28-33 | | | | | - 147972.301 - | 53408.167 |
| | 275-41-21 | | | | | - 147744.591 - | 53443.267 |
| | 275-41- 9 | | | | | - 147744.601 - | 53443.266 |
| | - 12 | | | | | - 0.010 + | 0.001 |

閉合差 = 0.010
精 度 = 1 / 23243

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-36 G0 A19 -- A25

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|------------|------------|------------|--------------|-------------|
| A20 | | 0- 5-48 | | | | - 147565.950 | - 53225.186 |
| A19 | 82-40-30 | | | | | + 7.357 | + 58.000 |
| | - 4 | 82-46-14 | 58.465 | + 0.125843 | + 0.992050 | + 0.000 | + 0.000 |
| B80 | 274-15-13 | | | | | - 147558.593 | - 53167.186 |
| | - 3 | 177- 1-24 | 43.873 | - 0.998651 | + 0.051929 | - 43.814 | + 2.278 |
| | | | | | | + 0.001 | + 0.000 |
| B81 | 163-38-23 | | | | | - 147602.406 | - 53164.908 |
| | - 4 | 160-39-43 | 41.686 | - 0.943581 | + 0.331141 | - 39.334 | + 13.804 |
| | | | | | | + 0.000 | + 0.000 |
| B82 | 203-39-30 | | | | | - 147641.740 | - 53151.104 |
| | - 4 | 184-19- 9 | 58.639 | - 0.997160 | - 0.075312 | - 58.472 | - 4.416 |
| | | | | | | + 0.000 | - 0.001 |
| B83 | 179-29-35 | | | | | - 147700.212 | - 53155.521 |
| | - 4 | 183-48-40 | 40.653 | - 0.997789 | - 0.066467 | - 40.563 | - 2.702 |
| | | | | | | + 0.001 | + 0.000 |
| B84 | 266-52-13 | | | | | - 147740.774 | - 53158.223 |
| | - 3 | 270-40-50 | 48.505 | + 0.011878 | - 0.999929 | + 0.576 | - 48.502 |
| | | | | | | + 0.000 | + 0.000 |
| A25 | 89-14-55 | | | | | - 147740.198 | - 53206.725 |
| A24 | - 4 | 179-55-41 | 291.821 | | | | |
| | 179-50-19 | | | | | - 174.250 | + 18.462 |
| | 0- 5-48 | | | | | - 147565.950 | - 53225.186 |
| | 179-56- 7 | | | | | - 147740.200 | - 53206.724 |
| | 179-55-41 | | | | | - 147740.198 | - 53206.725 |
| | - 26 | | | | | + 0.002 | - 0.001 |
| | | 閉合差 = | 0.002 | | | | |
| | | 精 度 = | 1 / 145910 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-37 GO A19 -- A25

| 点名 | 觀測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|---------|--------------|----------|----------------|-----------|
| A20 | 170-27-35 | 0- 5-48 | | | | - 147565.950 - | 53225.186 |
| A19 | - 6 | 170-33-17 | 54.249 | - 0.986443 + | 0.164106 | - 53.514 + | 8.903 |
| | | | | | | + 0.004 - | 0.003 |
| B85 | 185-21-35 | 175-54-46 | 72.812 | - 0.997457 + | 0.071275 | - 147619.460 - | 53216.286 |
| | - 6 | | | | | - 72.627 + | 5.190 |
| | | | | | | + 0.005 - | 0.005 |
| B86 | 178-53-20 | 174-48- 0 | 48.318 | - 0.995884 + | 0.090633 | - 147692.082 - | 53211.101 |
| | - 6 | | | | | - 48.119 + | 4.379 |
| | | | | | | + 0.003 - | 0.003 |
| A25 | 185- 7-47 | 179-55-41 | | | | - 147740.198 - | 53206.725 |
| A24 | - 6 | | 175.379 | | | | |
| | 179-50-17 | | | | | - 174.260 + | 18.472 |
| | 0- 5-48 | | | | | - 147565.950 - | 53225.186 |
| | 179-56- 5 | | | | | - 147740.210 - | 53206.714 |
| | 179-55-41 | | | | | - 147740.198 - | 53206.725 |
| | - 24 | | | | | + 0.012 - | 0.011 |

閉合差 = 0.016
精 度 = 1 / 10961

* * * * * A・H 型 平均 計算 書 * * * * *

交点の平均結果

| | | A L | X | Y |
|----|---|-------------|--------------|-----------|
| 交点 | 1 | 84-15-32 - | 147621.203 - | 53255.911 |
| 交点 | 2 | 263-41-27 - | 147630.487 - | 53383.595 |

多角路線 重量 標準方程式

| | | | | | | | |
|---------|-----------|-------------|-----------|-----|-------------|--------------|-----------|
| B-38 GO | S1= 0.170 | A1=S1+S2 | = + 0.293 | 1 | 84-15-33 - | 147621.205 - | 53255.914 |
| B-39 GO | S2= 0.123 | C1=S1 | = + 0.170 | -)2 | 84-15-51 - | 147621.194 - | 53255.908 |
| B-40 GO | S3= 0.152 | B2=S3+S4 | = + 0.266 | W 1 | - 18 | - 0.011 | - 0.006 |
| B-41 GO | S4= 0.114 | -C2=-S3 | = - 0.152 | 3 | 263-41- 9 - | 147630.491 - | 53383.596 |
| B-42 GO | S5= 0.128 | C3=S1+S3+S5 | = + 0.450 | -)4 | 263-41-22 - | 147630.491 - | 53383.595 |
| | | | | W 2 | - 13 | + 0.000 | - 0.001 |
| | | | | 1+5 | 263-41-49 - | 147630.481 - | 53383.597 |
| | | | | -)3 | 263-41- 9 - | 147630.491 - | 53383.596 |
| | | | | W 3 | + 40 | + 0.010 | - 0.001 |

標準方定式の結果

| | | A L | X | Y |
|------------------------------------|-----------|------------------|----------|----------|
| D 0=(A1B2C3)-(C1*2.B2)-(A1.C2**2)= | + 0.021 | K1.W1= + 84.348 | + 51.546 | + 28.116 |
| K 1=((C2**2)-(B2.C3)) / D 0 | = - 4.686 | K2.W2= - 16.289 | + 0.000 | - 1.253 |
| K 2=(C1.C2) / D 0 | = + 1.253 | K3.W3= + 87.760 | + 21.940 | - 2.194 |
| K 3=(C1.B2) / D 0 | = + 2.194 | A = + 155.819 | + 73.486 | + 24.669 |
| K 4=((C1**2)-(A1.C3)) / D 0 | = - 4.994 | K2.W1= - 22.554 | - 13.783 | - 7.518 |
| K 5=(-A1.C2) / D 0 | = - 2.160 | K4.W2= + 64.922 | + 0.000 | + 4.994 |
| K 6=(-A1.B2) / D 0 | = - 3.781 | K5.W3= - 86.400 | - 21.600 | + 2.160 |
| | | B = - 44.032 | - 35.383 | - 0.364 |
| | | K3.W1= - 39.492 | - 24.134 | - 13.164 |
| | | K5.W2= + 28.080 | + 0.000 | + 2.160 |
| | | K6.W3= - 151.240 | - 37.810 | + 3.781 |
| | | C = - 162.652 | - 61.944 | - 7.223 |

補正量計算

| (SA) + (SB) + (SC) = | | A L | (SA) + (SB) + (SC) = | | X | (SA) + (SB) + (SC) = | | Y |
|----------------------------|--------|-----------------|----------------------------|----------------|-------|----------------------------|--|----|
| | | " | | | MM | | | MM |
| 1 | + 26.4 | - 27.6 = - 1.0 | + 12.4 | - 10.5 = + 2.0 | + 4.1 | - 1.2 = + 3.0 | | |
| 2 | - 19.1 | = - 19.0 | - 9.0 | = - 9.0 | - 3.0 | = - 3.0 | | |
| 3 | - 6.6 | + 24.7 = + 18.0 | - 5.3 | + 9.4 = + 4.0 | - 0.0 | + 1.0 = + 1.0 | | |
| 4 | + 5.0 | = + 5.0 | + 4.0 | = + 4.0 | + 0.0 | = + 0.0 | | |
| 5 | | - 20.8 = - 21.0 | | - 7.9 = - 8.0 | | - 0.9 = - 1.0 | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-38 GO A26 -- B89

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|----------|---------|--------------|----------|----------------|-----------|
| A25 | 280-36-53 | 90-44-34 | | | | - 147738.670 - | 53324.604 |
| A26 | + 0 | 11-21-27 | 50.907 | + 0.980418 + | 0.196930 | + 49.910 + | 10.025 |
| | | | | | | + 0.001 + | 0.001 |
| B87 | 260-26-28 | 91-47-55 | 48.956 | - 0.031387 + | 0.999507 | - 147688.759 - | 53314.578 |
| | + 0 | | | | | + 1.537 + | 48.932 |
| | | | | | | + 0.001 + | 0.001 |
| B88 | 96-13-13 | 8- 1- 7 | 69.773 | + 0.990223 + | 0.139495 | - 147690.295 - | 53265.645 |
| | - 1 | | | | | + 69.091 + | 9.733 |
| | | | | | | + 0.001 + | 0.001 |
| B89 | 256-14-25 | 84-15-32 | | | | - 147621.203 - | 53255.911 |
| アンテナ | + 0 | | 169.636 | | | | |
| | 353-30-59 | | | | | + 117.464 + | 68.690 |
| | 90-44-34 | | | | | - 147738.670 - | 53324.604 |
| | 84-15-33 | | | | | - 147621.206 - | 53255.914 |
| | 84-15-32 | | | | | - 147621.203 - | 53255.911 |
| | - 1 | | | | | + 0.003 + | 0.003 |

閉合差 = 0.004
精 度 = 1 / 42409

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-39 G0 A19 -- B89

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|---------|------------|------------|----------------|-----------|
| A20 | 282-20-50 | 0- 5-48 | | | | - 147565.950 - | 53225.186 |
| A19 | - 5 | 282-26-33 | 29.249 | + 0.215460 | - 0.976513 | + 6.302 - | 28.562 |
| | | | | | | - 0.002 + | 0.000 |
| B91 | 149-33-53 | 252- 0-21 | 34.282 | - 0.308920 | - 0.951088 | - 147559.650 - | 53253.748 |
| | - 5 | | | | | - 10.590 - | 32.605 |
| | | | | | | - 0.003 - | 0.001 |
| B90 | 77- 8-18 | 149- 8-35 | 59.358 | - 0.858451 | + 0.512896 | - 147570.243 - | 53286.354 |
| | - 4 | | | | | - 50.956 + | 30.444 |
| | | | | | | - 0.004 - | 0.001 |
| B89 | 115- 7- 2 | 84-15-32 | | | | - 147621.203 - | 53255.911 |
| アンテナ | - 5 | | 122.889 | | | | |
| | 84-10- 3 | | | | | - 55.244 - | 30.723 |
| | 0- 5-48 | | | | | - 147565.950 - | 53225.186 |
| | 84-15-51 | | | | | - 147621.194 - | 53255.909 |
| | 84-15-32 | | | | | - 147621.203 - | 53255.911 |
| | - 19 | | | | | - 0.009 - | 0.002 |

閉合差 = 0.009
精 度 = 1 / 13654

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-40 GO A26 -- B94

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-----------|-----------|-----------|------------|------------|----------------|-----------|
| A25 | 182-15-18 | 90-44-34 | | | | - 147738.670 - | 53324.604 |
| A26 | + 4 | 272-59-56 | 45.097 | + 0.052317 | - 0.998631 | + 2.359 - | 45.035 |
| | | | | | | + 0.001 + | 0.000 |
| | 261-15-20 | | | | | - 147736.310 - | 53369.639 |
| B92 | + 5 | 354-15-21 | 46.922 | + 0.994979 | - 0.100087 | + 46.686 - | 4.696 |
| | | | | | | + 0.001 + | 0.001 |
| | 176-50-30 | | | | | - 147689.623 - | 53374.334 |
| B93 | + 5 | 351- 5-56 | 59.855 | + 0.987957 | - 0.154730 | + 59.134 - | 9.261 |
| | | | | | | + 0.002 + | 0.000 |
| | 92-35-27 | | | | | - 147630.487 - | 53383.595 |
| B94 アンテナ | + 4 | 263-41-27 | 151.874 | | | | |
| | 172-56-35 | | | | | + 108.179 - | 58.992 |
| | 90-44-34 | | | | | - 147738.670 - | 53324.604 |
| | 263-41- 9 | | | | | - 147630.491 - | 53383.596 |
| | 263-41-27 | 閉合差 = | 0.004 | | | - 147630.487 - | 53383.595 |
| | + 18 | 精 度 = | 1 / 37968 | | | + 0.004 + | 0.001 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-41 GO A22 -- B94

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-----------|-----------|-----------|------------|------------|----------------|-----------|
| A23 | 270-39-35 | 175-58-57 | | | | - 147587.341 - | 53454.311 |
| A22 | + 2 | 86-38-34 | 67.183 | + 0.058561 | + 0.998284 | + 3.934 + | 67.068 |
| | | | | | | + 0.002 + | 0.000 |
| B95 | 268-55-35 | 175-34-10 | 47.225 | - 0.997012 | + 0.077251 | - 147583.405 - | 53387.243 |
| | + 1 | | | | | - 47.084 + | 3.648 |
| | | | | | | + 0.002 + | 0.000 |
| B94 アンテナ | 268- 7-15 | 263-41-27 | 114.408 | | | - 147630.487 - | 53383.595 |
| | + 2 | | | | | | |
| | 87-42-25 | | | | | - 43.150 + | 70.716 |
| | 175-58-57 | | | | | - 147587.341 - | 53454.311 |
| | 263-41-22 | | | | | - 147630.491 - | 53383.595 |
| | 263-41-27 | 閉合差 = | 0.004 | | | - 147630.487 - | 53383.595 |
| | + 5 | 精 度 = | 1 / 28602 | | | + 0.004 + | 0.000 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-42 GO B89 -- B94

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-------------|-----------|-----------|-----------|------------|------------|----------------|-----------|
| アンテナ | 176-38-18 | 84-15-32 | | | | - 147621.203 - | 53255.911 |
| B89 | - 5 | 260-53-45 | 52.591 | - 0.158230 | - 0.987402 | - 8.321 - | 51.928 |
| | | | | | | 0.004 + | 0.000 |
| | 186-28-58 | | | | | - 147629.528 - | 53307.839 |
| B96 | - 5 | 267-22-38 | 42.195 | - 0.045760 | - 0.998952 | - 1.931 - | 42.151 |
| | | | | | | 0.003 - | 0.001 |
| | 184-17-23 | | | | | - 147631.462 - | 53349.991 |
| B97 | - 6 | 271-39-55 | 33.618 | + 0.029060 | - 0.999578 | + 0.977 - | 33.604 |
| | | | | | | 0.002 + | 0.000 |
| | 172- 1-37 | | | | | - 147630.487 - | 53383.595 |
| B94 アンテナ | - 5 | 263-41-27 | 128.404 | | | | |
| | 179-26-16 | | | | | - 9.275 - | 127.683 |
| | 84-15-32 | | | | | - 147621.203 - | 53255.911 |
| | 263-41-48 | | | | | - 147630.478 - | 53383.594 |
| | 263-41-27 | 閉合差 = | 0.009 | | | - 147630.487 - | 53383.595 |
| | - 21 | 精 度 = | 1 / 14267 | | | - 0.009 - | 0.001 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-43 GO A22 -- A23

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|-----|-----------|-----------|---------|--------------|----------|----------------|-----------|
| A23 | 340-35- 0 | 175-58-57 | | | | - 147587.341 - | 53454.311 |
| A22 | - 4 | 156-33-53 | 55.538 | - 0.917510 + | 0.397713 | - 50.957 + | 22.088 |
| | | | | | | + 0.001 - | 0.001 |
| B98 | 199-18-53 | 175-52-42 | 51.990 | - 0.997414 + | 0.071875 | - 147638.297 - | 53432.224 |
| | - 4 | | | | | - 51.856 + | 3.737 |
| | | | | | | + 0.001 + | 0.000 |
| B99 | 199-18-28 | 195-11- 6 | 56.420 | - 0.965085 - | 0.261937 | - 147690.152 - | 53428.487 |
| | - 4 | | | | | - 54.450 - | 14.778 |
| | | | | | | + 0.001 - | 0.001 |
| A23 | 260-30- 7 | 275-41- 9 | | | | - 147744.601 - | 53443.266 |
| A28 | - 4 | | 163.948 | | | | |
| | 99-42-28 | | | | | - 157.263 + | 11.047 |
| | 175-58-57 | | | | | - 147587.341 - | 53454.311 |
| | 275-41-25 | | | | | - 147744.604 - | 53443.264 |
| | 275-41- 9 | | | | | - 147744.601 - | 53443.266 |
| | - 16 | | | | | + 0.003 - | 0.002 |

閉合差 = 0.004
精 度 = 1 / 40987

* * * * * A・H 型 平均 計算 書 * * * * *

交点の平均結果

| | | A L | X | Y |
|----|---|-----------|--------------|-------------|
| 交点 | 1 | 176-53-36 | - 147528.406 | - 53390.841 |
| 交点 | 2 | 1-57-42 | - 147363.478 | - 53364.002 |

多角路線 重量 標準方程式

| | | | | | | | |
|---------|-----------|-------------|-----------|-----|-----------|--------------|-------------|
| B-44 GO | S1= 0.104 | A1=S1+S2 | = + 0.315 | 1 | 176-53-39 | - 147528.409 | - 53390.846 |
| B-45 GO | S2= 0.211 | C1=S1 | = + 0.104 | -)2 | 176-53-31 | - 147528.406 | - 53390.839 |
| B-46 GO | S3= 0.308 | B2=S3+S4 | = + 0.419 | W 1 | + 8 | - 0.003 | - 0.007 |
| B-47 GO | S4= 0.111 | -C2=-S3 | = - 0.308 | 3 | 1-57-38 | - 147363.479 | - 53363.999 |
| B-48 GO | S5= 0.213 | C3=S1+S3+S5 | = + 0.625 | -)4 | 1-57-42 | - 147363.475 | - 53363.998 |
| | | | | W 2 | - 4 | - 0.004 | - 0.001 |
| | | | | 1+5 | 1-57-48 | - 147363.486 | - 53364.016 |
| | | | | -)3 | 1-57-38 | - 147363.479 | - 53363.999 |
| | | | | W 3 | + 10 | - 0.007 | - 0.017 |

標準方定式の結果

| | | A L | X | Y | |
|-----------------------------------|-----------|--------|----------|----------|----------|
| D 0=(A1B2C3)-(C1*2.B2)-(A1.C2*2)= | + 0.048 | K1.W1= | - 27.792 | + 10.422 | + 24.318 |
| K 1=((C2*2)-(B2.C3)) / D 0 | = - 3.474 | K2.W2= | - 2.664 | - 2.664 | - 0.666 |
| K 2=(C1.C2) / D 0 | = + 0.666 | K3.W3= | + 9.060 | - 6.342 | - 15.402 |
| K 3=(C1.B2) / D 0 | = + 0.906 | A = | - 21.396 | + 1.416 | + 8.250 |
| K 4=((C1*2)-(A1.C3)) / D 0 | = - 3.870 | K2.W1= | + 5.328 | - 1.998 | - 4.662 |
| K 5=(-A1.C2) / D 0 | = - 2.018 | K4.W2= | + 15.480 | + 15.480 | + 3.870 |
| K 6=(-A1.B2) / D 0 | = - 2.745 | K5.W3= | - 20.180 | + 14.126 | + 34.306 |
| | | B = | + 0.628 | + 27.608 | + 33.514 |
| | | K3.W1= | + 7.248 | - 2.718 | - 6.342 |
| | | K5.W2= | + 8.072 | + 8.072 | + 2.018 |
| | | K6.W3= | - 27.450 | + 19.215 | + 46.665 |
| | | C = | - 12.130 | + 24.569 | + 42.341 |

補正量計算

| (SA) + (SB) + (SC) = | | A L | (SA) + (SB) + (SC) = | X | (SA) + (SB) + (SC) = | Y |
|----------------------------|-------|---------------|----------------------------|---------------|----------------------------|----------------|
| | | | | MM | | MM |
| 1 | - 2.2 | - 1.2 = - 3.0 | + 0.1 | + 2.5 = + 3.0 | + 0.8 | + 4.4 = + 5.0 |
| 2 | + 4.5 | = + 5.0 | - 0.2 | = + 0.0 | - 1.7 | = - 2.0 |
| 3 | + 0.1 | + 3.7 = + 4.0 | + 8.5 | - 7.5 = + 1.0 | + 10.3 | - 13.0 = - 3.0 |
| 4 | - 0.0 | = + 0.0 | - 3.0 | = - 3.0 | - 3.7 | = - 4.0 |
| 5 | | - 2.5 = - 3.0 | | + 5.2 = + 5.0 | | + 9.0 = + 9.0 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-44 GO A22 -- B101

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|--------------|-----------|-----------|-----------|------------|------------|----------------|-----------|
| A23 | 199-25-55 | 175-58-57 | | | | - 147587.341 - | 53454.311 |
| A22 | - 1 | 15-24-51 | 54.959 | + 0.964030 | + 0.265794 | + 52.982 + | 14.608 |
| | | | | | | + 0.002 + | 0.003 |
| B100 | 247-38-35 | 83- 3-25 | 49.218 | + 0.120883 | + 0.992667 | - 147534.357 - | 53439.700 |
| | - 1 | | | | | + 5.950 + | 48.857 |
| | | | | | | + 0.001 + | 0.002 |
| B101 アンテナ | 273-50-12 | 176-53-36 | 104.177 | | | - 147528.406 - | 53390.841 |
| | - 1 | | | | | | |
| | 0-54-42 | | | | | + 58.932 + | 63.465 |
| | 175-58-57 | | | | | - 147587.341 - | 53454.311 |
| | 176-53-39 | | | | | - 147528.409 - | 53390.846 |
| | 176-53-36 | 閉合差 = | 0.006 | | | - 147528.406 - | 53390.841 |
| | - 3 | 精 度 = | 1 / 17363 | | | + 0.003 + | 0.005 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-45 GO A2D -- B101

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|---------|------------|------------|----------------|-----------|
| A19 | 88-19- 8 | 180- 5-48 | | | | - 147469.467 - | 53225.023 |
| A20 | + 1 | 268-24-57 | 63.462 | - 0.027645 | - 0.999618 | - 1.754 - | 63.438 |
| | | | | | | + 0.000 - | 0.001 |
| B104 | 90-33-35 | 178-58-33 | 43.500 | - 0.999840 | + 0.017874 | - 43.493 + | 0.778 |
| | | | | | | + 0.000 + | 0.000 |
| B103 | 266-51-50 | 265-50-24 | 35.809 | - 0.072542 | - 0.997365 | - 2.598 - | 35.715 |
| | | | | | | + 0.000 + | 0.000 |
| B102 | 174-49- 5 | 260-39-30 | 68.347 | - 0.162321 | - 0.986738 | - 11.094 - | 67.441 |
| | | | | | | + 0.000 - | 0.001 |
| B101 | 96-14- 5 | 176-53-36 | | | | - 147528.406 - | 53390.841 |
| アンテナ | | | 211.118 | | | | |
| | 356-47-43 | | | | | - 58.939 - | 165.816 |
| | 180- 5-48 | | | | | - 147469.467 - | 53225.023 |
| | 176-53-31 | | | | | - 147528.406 - | 53390.839 |
| | 176-53-36 | | | | | - 147528.406 - | 53390.841 |
| | + 5 | | | | | + 0.000 - | 0.002 |

閉合差 = 0.002
精 度 = 1 / 105559

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-46 GO A22 -- B109

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|--------------|-----------|-----------|-----------|------------|------------|----------------|-----------|
| A23 | 188- 6- 0 | 175-58-57 | | | | - 147587.341 - | 53454.311 |
| A22 | + 1 | 4- 4-58 | 110.139 | + 0.997462 | + 0.071198 | + 109.859 + | 7.842 |
| | | | | | | + 0.001 - | 0.001 |
| B105 | 174-26-43 | 358-31-41 | 53.332 | + 0.999670 | - 0.025687 | - 147477.481 - | 53446.470 |
| | + 0 | | | | | + 53.314 - | 1.370 |
| | | | | | | + 0.000 - | 0.001 |
| B106 | 177- 9-50 | 355-41-32 | 55.942 | + 0.997175 | - 0.075114 | - 147424.167 - | 53447.841 |
| | + 1 | | | | | + 55.784 - | 4.202 |
| | | | | | | + 0.000 - | 0.001 |
| B107 | 270-10-58 | 85-52-31 | 43.750 | + 0.071928 | + 0.997410 | - 147368.383 - | 53452.044 |
| | + 1 | | | | | + 3.147 + | 43.637 |
| | | | | | | + 0.001 + | 0.000 |
| B108 | 181-51-30 | 87-44- 1 | 44.441 | + 0.039546 | + 0.999218 | - 147365.235 - | 53408.407 |
| | + 0 | | | | | + 1.757 + | 44.406 |
| | | | | | | + 0.000 - | 0.001 |
| B109 アンテナ | 94-13-40 | 1-57-42 | 307.604 | | | - 147363.478 - | 53364.002 |
| | + 1 | | | | | | |
| | 185-58-41 | | | | | + 223.861 + | 90.313 |
| | 175-58-57 | | | | | - 147587.341 - | 53454.311 |
| | 1-57-38 | | | | | - 147363.480 - | 53363.998 |
| | 1-57-42 | 閉合差 = | 0.004 | | | - 147363.478 - | 53364.002 |
| | + 4 | 精 度 = | 1 / 76901 | | | + 0.002 - | 0.004 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-47 GO A5 -- B109

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|--------------|-----------|-----------|-----------|------------|------------|----------------|-----------|
| A6 | 190-27-45 | 86-44-47 | | | | - 147356.700 - | 53256.036 |
| A5 | + 0 | 277-12-32 | 60.355 | + 0.125487 | - 0.992095 | + 7.574 - | 59.878 |
| | | | | | | - 0.002 - | 0.002 |
| B110 | 156-10-30 | | | | | - 147349.128 - | 53315.916 |
| | + 0 | 253-23- 2 | 50.179 | - 0.285958 | - 0.958242 | - 14.349 - | 48.084 |
| | | | | | | - 0.001 - | 0.002 |
| B109 アンテナ | 288-34-40 | | | | | - 147363.478 - | 53364.002 |
| | + 0 | 1-57-42 | 110.534 | | | | |
| | 275-12-55 | | | | | - 6.775 - | 107.962 |
| | 86-44-47 | | | | | - 147356.700 - | 53256.036 |
| | 1-57-42 | | | | | - 147363.475 - | 53363.998 |
| | 1-57-42 | 閉合差 = | 0.005 | | | - 147363.478 - | 53364.002 |
| | + 0 | 精 度 = | 1 / 22107 | | | - 0.003 - | 0.004 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-48 GO B101 -- B109

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|--------------|-----------|-----------------|---------|------------|------------|----------------|-----------|
| アンテナ | 181-49-30 | 176-53-36 | | | | - 147528.406 - | 53390.841 |
| B101 | + 0 | 358-43- 6 | 62.249 | + 0.999750 | - 0.022367 | + 62.233 - | 1.392 |
| | | | | | | + 0.001 + | 0.002 |
| B111 | 281-18-45 | 100- 1-50 | 40.360 | - 0.174173 | + 0.984715 | - 147466.172 - | 53392.231 |
| | - 1 | | | | | - 7.030 + | 39.743 |
| | | | | | | + 0.001 + | 0.002 |
| B112 | 69-14-43 | 349-16-32 | 41.024 | + 0.982533 | - 0.186086 | - 147473.201 - | 53352.486 |
| | - 1 | | | | | + 40.307 - | 7.634 |
| | | | | | | + 0.001 + | 0.001 |
| B113 | 183-24-13 | 352-40-45 | 33.872 | + 0.991848 | - 0.127425 | - 147432.893 - | 53360.119 |
| | + 0 | | | | | + 33.596 - | 4.316 |
| | | | | | | + 0.001 + | 0.002 |
| B114 | 188- 0-33 | 0-41-18 | 35.820 | + 0.999928 | + 0.012013 | - 147399.296 - | 53364.433 |
| | + 0 | | | | | + 35.817 + | 0.430 |
| | | | | | | + 0.001 + | 0.001 |
| B109 アンテナ | 181-16-25 | 1-57-42 | 213.325 | | | - 147363.478 - | 53364.002 |
| | - 1 | | | | | | |
| | 185- 4- 9 | | | | | + 164.923 + | 26.831 |
| | 176-53-36 | | | | | - 147528.406 - | 53390.841 |
| | 1-57-45 | | | | | - 147363.483 - | 53364.010 |
| | 1-57-42 | 閉合差 = 0.009 | | | | - 147363.478 - | 53364.002 |
| | - 3 | 精 度 = 1 / 23703 | | | | + 0.005 + | 0.008 |

* * * * * A・H 型 平均 計算 書 * * * * *

交点の平均結果

| | A L | X | Y |
|------|-------------|--------------|-----------|
| 交点 1 | 77- 4-13 - | 147412.371 - | 53176.939 |
| 交点 2 | 297-13- 2 - | 147397.963 - | 53318.989 |

多角路線 重量 標準方程式

| | | | | | | | |
|---------|-----------|-------------|-----------|-----|-------------|--------------|-----------|
| B-49 GO | S1= 0.109 | A1=S1+S2 | = + 0.263 | 1 | 77- 4- 8 - | 147412.373 - | 53176.939 |
| B-50 GO | S2= 0.154 | C1=S1 | = + 0.109 | -)2 | 77- 4-26 - | 147412.372 - | 53176.938 |
| B-51 GO | S3= 0.163 | B2=S3+S4 | = + 0.259 | W 1 | - 18 | - 0.001 | - 0.001 |
| B-52 GO | S4= 0.096 | -C2=-S3 | = - 0.163 | 3 | 297-12-45 - | 147397.956 - | 53318.976 |
| B-53 GO | S5= 0.143 | C3=S1+S3+S5 | = + 0.415 | -)4 | 297-13- 8 - | 147397.965 - | 53318.996 |
| | | | | W 2 | - 23 | + 0.009 | + 0.020 |
| | | | | 1+5 | 297-13- 4 - | 147397.967 - | 53318.989 |
| | | | | -)3 | 297-12-45 - | 147397.956 - | 53318.976 |
| | | | | W 3 | + 19 | - 0.011 | - 0.013 |

標準方程式の結果

| | A L | X | Y |
|------------------------------------|-----------|------------------|--------------------|
| D 0=(A1B2C3)-(C1*2.B2)-(A1.C2**2)= | + 0.018 | K1.W1= + 80.010 | + 4.445 + 4.445 |
| K 1=((C2**2)-(B2.C3)) / D 0 | = - 4.445 | K2.W2= - 22.448 | + 8.784 + 19.520 |
| K 2=(C1.C2) / D 0 | = + 0.976 | K3.W3= + 29.469 | - 17.061 - 20.163 |
| K 3=(C1.B2) / D 0 | = + 1.551 | A = + 87.031 | - 3.832 + 3.802 |
| K 4=((C1**2)-(A1.C3)) / D 0 | = - 5.343 | K2.W1= - 17.568 | - 0.976 - 0.976 |
| K 5=(-A1.C2) / D 0 | = - 2.355 | K4.W2= + 122.889 | - 48.087 - 106.860 |
| K 6=(-A1.B2) / D 0 | = - 3.742 | K5.W3= - 44.745 | + 25.905 + 30.615 |
| | | B = + 60.576 | - 23.158 - 77.221 |
| | | K3.W1= - 27.918 | - 1.551 - 1.551 |
| | | K5.W2= + 54.165 | - 21.195 - 47.100 |
| | | K6.W3= - 71.098 | + 41.162 + 48.646 |
| | | C = - 44.851 | + 18.416 - 0.005 |

補正量計算

| | (SA) + (SB) + (SC) = A L | (SA) + (SB) + (SC) = X | (SA) + (SB) + (SC) = Y |
|---|--------------------------------|------------------------------|------------------------------|
| | MM | MM | MM |
| 1 | + 9.4 - 4.8 = + 5.0 | - 0.4 + 2.0 = + 2.0 | + 0.4 - 0.0 = + 0.0 |
| 2 | - 13.4 = - 13.0 | + 0.5 = + 1.0 | - 0.5 = - 1.0 |
| 3 | + 9.8 + 7.3 = + 17.0 | - 3.7 - 3.0 = - 7.0 | - 12.5 + 0.0 = - 13.0 |
| 4 | - 5.8 = - 6.0 | + 2.2 = + 2.0 | + 7.4 = + 7.0 |
| 5 | - 6.4 = - 6.0 | + 2.6 = + 3.0 | - 0.0 = + 0.0 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-49 GO A20 -- B116

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|--------------|-----------|-----------|-----------|------------|------------|----------------|-----------|
| A19 | 261-20-18 | 180- 5-48 | | | | - 147469.467 - | 53225.023 |
| A20 | + 2 | 81-26- 8 | 59.193 | + 0.148922 | + 0.988849 | + 8.815 + | 58.533 |
| | | | | | | + 0.001 + | 0.001 |
| B115 | 86-21- 5 | 347-47-14 | 49.397 | + 0.977369 | - 0.211543 | + 48.279 - | 10.450 |
| | + 1 | | | | | + 0.001 + | 0.000 |
| B116 アンテナ | 269-16-57 | 77- 4-13 | 108.590 | | | - 147412.371 - | 53176.939 |
| | + 2 | | | | | | |
| | 256-58-20 | | | | | + 57.094 + | 48.083 |
| | 180- 5-48 | | | | | - 147469.467 - | 53225.023 |
| | 77- 4- 8 | | | | | - 147412.373 - | 53176.940 |
| | 77- 4-13 | | | | | - 147412.371 - | 53176.939 |
| | + 5 | | | | | + 0.002 + | 0.001 |
| | | 閉合差 = | 0.002 | | | | |
| | | 精 度 = | 1 / 54295 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-50 GO A6 -- B116

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|--------------|-----------|-----------|------------|------------|------------|----------------|-----------|
| A4 | 179-14-8 | 87-40-43 | | | | - 147346.506 - | 53076.709 |
| A6 | - 4 | 266-54-47 | 92.285 | - 0.053851 | - 0.998549 | - 4.970 - | 92.151 |
| | | | | | | + 0.001 - | 0.001 |
| B117 | 100-38-40 | | | | | - 147351.475 - | 53168.861 |
| | - 5 | 187-33-22 | 61.429 | - 0.991317 | - 0.131497 | - 60.896 - | 8.078 |
| | | | | | | + 0.000 + | 0.000 |
| B116 アンテナ | 69-30-55 | | | | | - 147412.371 - | 53176.939 |
| | - 4 | 77- 4-13 | 153.714 | | | | |
| | 349-23-43 | | | | | - 65.866 - | 100.229 |
| | 87-40-43 | | | | | - 147346.506 - | 53076.709 |
| | 77- 4-26 | | | | | - 147412.372 - | 53176.938 |
| | 77- 4-13 | 閉合差 = | 0.001 | | | - 147412.371 - | 53176.939 |
| | - 13 | 精 度 = | 1 / 153714 | | | + 0.001 - | 0.001 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-51 G0 A20 -- B122

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|--------------|-----------------------|-----------|-----------|------------|------------|--------------------------------|------------------------------|
| A19 | | 180- 5-48 | | | | - 147469.467 - | 53225.023 |
| A20 | 108- 4- 3 + 3 | 288- 9-54 | 26.583 | + 0.311755 | - 0.950163 | + 8.287 - - 0.001 - | 25.258 0.002 |
| B118 | 261-32-23 + 3 | 9-42-20 | 29.441 | + 0.985687 | + 0.168585 | + 29.020 + - 0.001 - | 53250.283 4.963 0.002 |
| B119 | 84-39-15 + 2 | 274-21-37 | 32.881 | + 0.076028 | - 0.997106 | + 2.500 - - 0.002 - | 53245.322 32.786 0.003 |
| B120 | 173-43-53 + 3 | 268- 5-33 | 40.771 | - 0.033286 | - 0.999446 | - 1.357 - - 0.002 - | 53278.111 40.748 0.003 |
| B121 | 271-41-28 + 3 | 359-47- 4 | 33.061 | + 0.999993 | - 0.003762 | + 33.061 - - 0.001 - | 53318.862 0.124 0.003 |
| B122 アンテナ | 117-25-55 + 3 | 297-13- 2 | 162.737 | | | - 147397.963 - | 53318.989 |
| | 117- 6-57 | | | | | + 71.511 - | 93.953 |
| | 180- 5-48 | | | | | - 147469.467 - | 53225.023 |
| | 297-12-45 | | | | | - 147397.956 - | 53318.976 |
| | 297-13- 2 + 17 | | | | | - 147397.963 - | 53318.989 |
| | | 閉合差 = | 0.015 | | | - 0.007 - | 0.013 |
| | | 精 度 = | 1 / 10849 | | | | |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-52 G0 A5 -- B122

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|--------------|-----------|-----------|-----------|------------|------------|----------------|-----------|
| A6 | 179-14- 3 | 86-44-47 | | | | - 147356.700 - | 53256.036 |
| A5 | - 2 | 265-58-48 | 58.174 | - 0.070105 | - 0.997540 | - 4.078 - | 58.031 |
| | | | | | | + 0.001 + | 0.004 |
| B123 | 101-34-13 | | | | | - 147360.777 - | 53314.063 |
| | - 2 | 187-32-59 | 37.512 | - 0.991331 | - 0.131387 | - 37.187 - | 4.929 |
| | | | | | | + 0.001 + | 0.003 |
| B122 アンテナ | 289-40- 5 | | | | | - 147397.963 - | 53318.989 |
| | - 2 | 297-13- 2 | 95.686 | | | | |
| | 210-28-21 | | | | | - 41.265 - | 62.960 |
| | 86-44-47 | | | | | - 147356.700 - | 53256.036 |
| | 297-13- 8 | | | | | - 147397.965 - | 53318.996 |
| | 297-13- 2 | 閉合差 = | 0.007 | | | - 147397.963 - | 53318.989 |
| | - 6 | 精 度 = | 1 / 13669 | | | + 0.002 + | 0.007 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-53 G0 B116 -- B122

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|--------------|---------------------|-----------|---------|------------|------------|--|--|
| アンテナ | | 77- 4-13 | | | | | |
| B116 | 203- 0-18 - 1 | 280- 4-30 | 37.433 | + 0.174937 | - 0.984580 | + 147412.371 + 6.548 + 0.001 | - 53176.939 - 36.856 + 0.000 |
| B124 | 171-39-50 - 2 | 271-44-18 | 38.465 | + 0.030335 | - 0.999540 | + 147405.822 + 1.167 + 0.000 | - 53213.795 - 38.447 + 0.000 |
| B125 | 190- 8-30 - 1 | 281-52-47 | 37.169 | + 0.205858 | - 0.978582 | + 147404.655 + 7.652 + 0.001 | - 53252.242 - 36.373 + 0.000 |
| B126 | 166-18-33 - 2 | 268-11-18 | 30.389 | - 0.031614 | - 0.999500 | - 147397.002 - 0.961 + 0.000 | - 53288.615 - 30.374 + 0.000 |
| B122 アンテナ | 209- 1-45 - 1 | 297-13- 2 | 143.456 | | | - 147397.963 | - 53318.989 |
| | 220- 8-56 | | | | | + 14.406 | - 142.050 |
| | 77- 4-13 | | | | | - 147412.371 | - 53176.939 |
| | 297-13- 9 | | | | | - 147397.965 | - 53318.989 |
| | 297-13- 2 | | | | | - 147397.963 | - 53318.989 |
| | - 7 | | | | | + 0.002 | + 0.000 |

閉合差 = 0.002
精 度 = 1 / 71728

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-54 G0 A20 -- A19

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|-----------|--------------|----------|----------------|-----------|
| A19 | 358-25-45 | 180- 5-48 | | | | - 147469.467 - | 53225.023 |
| A20 | - 2 | 178-31-31 | 44.687 | - 0.999669 + | 0.025736 | - 44.672 + | 1.150 |
| | | | | | | - 0.002 + | 0.000 |
| | 182-55-33 | | | | | - 147514.141 - | 53223.873 |
| B127 | - 1 | 181-27- 3 | 51.824 | - 0.999679 - | 0.025319 | - 51.807 - | 1.312 |
| | | | | | | - 0.002 - | 0.001 |
| | 358-38-47 | | | | | - 147565.950 - | 53225.186 |
| A19 | - 2 | 0- 5-48 | | | | | |
| A20 | | | 96.511 | | | | |
| | 180- 0- 5 | | | | | - 96.479 - | 0.162 |
| | 180- 5-48 | | | | | - 147469.467 - | 53225.023 |
| | 0- 5-53 | | | | | - 147565.946 - | 53225.185 |
| | 0- 5-48 | 閉合差 = | 0.004 | | | - 147565.950 - | 53225.186 |
| | - 5 | 精 度 = | 1 / 24128 | | | - 0.004 - | 0.001 |

* * * * 結 合 多 角 計 算 書 * * * *

路線名 = B-55 GO A25 -- A26

| 点名 | 観測角 | 方向角 | 距離 | C O S | S I N | X | Y |
|------|-----------|-----------|---------|------------|------------|----------------|-----------|
| A24 | 89-59-25 | 179-55-41 | | | | - 147740.198 - | 53206.725 |
| A25 | + 3 | 269-55- 9 | 65.971 | - 0.001411 | - 0.999999 | - 0.093 - | 65.971 |
| | | | | | | - 0.002 + | 0.001 |
| B128 | 181-52-18 | 271-47-29 | 51.935 | + 0.031261 | - 0.999511 | + 1.624 - | 51.910 |
| | + 2 | | | | | - 0.001 + | 0.001 |
| A26 | 358-57- 2 | 90-44-34 | | | | - 147738.670 - | 53324.604 |
| A25 | + 3 | | 117.906 | | | | |
| | 270-48-45 | | | | | + 1.531 - | 117.881 |
| | 179-55-41 | | | | | - 147740.198 - | 53206.725 |
| | 90-44-26 | | | | | - 147738.667 - | 53324.606 |
| | 90-44-34 | | | | | - 147738.670 - | 53324.604 |
| | + 8 | | | | | - 0.003 + | 0.002 |

閉合差 = 0.004
精 度 = 1 / 29476