

Log. 11,88956 = 1,0751659
 Log. sin t = 9,7954369
 Log. cos δ² = 9,9944938
 Log. cos φ² = 9,6329890
 Compl. Log. 4 = 9,3979401
 9,8960257

$\frac{\cos \varphi^2 \cos \delta^2 \sin t}{4} \left\{ \frac{\sin 2 \gamma}{\cos \frac{1}{2} Z^4} + \frac{\sin 2 \beta}{\sin \frac{1}{2} Z^4} \right\} = 0,78709$ Log. N = 9,3071322
 - M Cotg. t = 0,58426 Log. 2,856 = 0,4557582
 folglich N = 0,20283 Log. 2,856 N = 9,7628904

und endlich: $\Delta \alpha = \frac{M}{n} \cdot \Sigma \cdot \frac{2 \sin^2 \frac{1}{2} \Delta t}{\sin 1''} + \frac{2,856 N}{n} \cdot \Sigma \cdot \left(\frac{\Delta t'}{10}\right)^3$
 Log. M = 9,6693166 neg.
 Log. 994,72 = 2,9977009
 Compl. Log. 5 = 9,3010300

Log. $\left(\frac{M}{n} \cdot \Sigma \cdot \frac{2 \sin^2 \frac{1}{2} \Delta t}{\sin 1''}\right) = 1,9680475$ neg. = - 92'',906
 Log. 2,856 N = 9,7628904
 Log. 3,299 = 0,5183823
 Compl. Log. 5 = 9,3010300

Log. $\left(\frac{2,856 N}{n} \cdot \Sigma \cdot \left(\frac{\Delta t'}{10}\right)^3\right) = 9,5823027$ + 0'',382
 $\Delta \alpha = - 92'',542 = - 0^\circ 1' 32'',52$
 $180^\circ - \beta - \gamma = 43^\circ 14' 13'',0$
 + A = 172 32 4,0

215 46 17,0
 - Δ α = 0 1 32,52

Azimuthbogen FES'D = 215 44 44,48
 „ DCH = 35 44 44,48 = FCE.

§. 145.

**Zweite Methode der Auflösung des zweiten Beispiels nach Bohnenbergers
 geogr. Ortsbestimmung von 1795.**

Im Dreieck PSZ ist $\sin Z = \sin \alpha = \frac{\sin t \cos \delta}{\cos h}$ Fig. 76.

1. Beobachtung t = 43° 2' 16'',78 Log. sin t = 9,8340920
 δ = 6 26 23 Log. cos δ = 9,9972511
 h = 23 2 4 C. Log. cos h = 0,0360849
 Log. sin α = 9,8674280
 180°
 α = 47° 28' 14'',90
 132 31 45,10
 A' = 168 17 0
 Azimuth ad 1 = 35 45 14,9

2. Beobachtung $t = 39^{\circ} 8' 38'',68$
 $\delta = 6 26 38$
 $h = 24 51 15$

Log. sin $t = 9,8002170$
 Log. cos $\delta = 9,9972476$
 C. Log. cos $h = 0,0422105$
 Log. sin $\alpha = 9,8396751$
 180°
 $\alpha = 43^{\circ} 44' 3'',05$
136 15 56,95

$A' = 172 1$
 Azimuth ad 2 = 35 45 3,05

3. Beobachtung $t = 38^{\circ} 22' 54'',88$
 $\delta = 6 26 41$
 $h = 25 11 47$

Log. sin $t = 9,7930219$
 Log. cos $\delta = 9,9972469$
 C. Log. cos $h = 0,0434215$
 Log. sin $\alpha = 9,8336903$
 180°
 $\alpha = 42^{\circ} 59' 18'',80$
137 0 41,20

$A' = 172 45 20$
 Azimuth ad 3 = 35 44 38,8

4. Beobachtung $t = 37^{\circ} 3' 22'',32$
 $\delta = 6 26 46$
 $h = 25 46 49$

Log. sin $t = 9,7800278$
 Log. cos $\delta = 9,9972457$
 C. Log. cos $h = 0,0455314$
 Log. sin $\alpha = 9,8228049$
 180°
 $\alpha = 41^{\circ} 40' 49'',32$
138 19 10,68

$A' = 174 3 40$
 Azimuth ad 4 = 35 44 29,28

5. Beobachtung $t = 35 33 25'',0$
 $\delta = 6 26 51$
 $h = 26 25 22$

Log. sin $t = 9,7645586$
 Log. cos $\delta = 9,9972445$
 C. Log. cos $h = 0,0479175$
 Log. sin $\alpha = 9,8097206$
 180°
 $\alpha = 40^{\circ} 11' 0'',96$
139 48 59,04

$A' = 175 33 20$
 Azimuth ad 5 = 35 44 20,96

Das arithmetische Mittel aus den 5 Bestimmungen

1. $35^{\circ} 45' 14'',9$
2. $35 45 3,05$
3. $35 44 38,80$
4. $35 44 29,28$
5. $35 44 20,96$

Summe 178 43 46,99

Azimuth des Punktes F = 35 44 45,39 = FEC. diff. mit I um $0'',91$.