

From Mark Godwin:

$$\Delta XEl = G_1 + G_2 \cos El + G_3 \sin El + G_4 \sin El \cos Az + G_5 \sin El \sin Az$$

$$\Delta El = -G_4 \sin Az + G_5 \cos Az + G_7 + G_8 \cos El + G_9 \cot El$$

$$G_4 = -\phi \sin K_A$$

$$G_5 = \phi \cos K_A$$

From the FS:

$$\Delta Az = P_1 + P_3 \tan El - P_4 \sec El + P_5 \sin Az \tan El - P_6 \cos Az \tan El$$

$$\Delta El = P_5 \cos Az + P_6 \sin Az + P_7 + P_8 \cos El + P_{23} \cot El$$

Note:

$$\Delta Az = G_1 \sec El + G_2 + G_3 \tan El + G_4 \tan El \cos Az + G_5 \tan El \sin Az$$

So:

$$P_1 = G_2$$

$$P_3 = G_3$$

$$P_4 = -G_1$$

$$P_5 = G_5 = \phi \cos K_A$$

$$P_6 = -G_4 = \phi \sin K_A$$

$$P_7 = G_7$$

$$P_8 = G_8$$

$$P_{23} = G_9$$

$$K_A = \text{atan2}(P_6, P_5)$$

$$\phi = \sqrt{P_5^2 + P_6^2}$$