SOLUCIONES EJERCICIOS CAPITÁN DE YATE

e) a_e = arcsen (sen d x sen l_e + cos d x cos l_e x cos P) = 76° 9.6′ $\Delta a = (a_v - a_e) = +2.4'$

Z = arctan [sen P / (tan d x cos l_e – sen l_e x cos P)] = + 1.5° Z = N 1.5 E

Sol 1438(20)	**l_e = 13° 40.8′ S** **L_e = 38° 9.6′ W** **Z = N 1.5 E** **Δa = + 2.4′**

Nótese que la observación se ha hecho próxima al mediodía y cara al Norte, por lo que se obtiene un acimut casi cero (N).

f) $\Delta l = \Delta a$ x cos Z = 2.4′ N $l_o = l_e + \Delta l$ = 13° 38.4′ S $l_m = (l_o + l_e)/2$ = 13° 39.6′ S

$\Delta L = \Delta a$ x sen Z /cos l_m = 0.1′ E $L_o = L_e + \Delta L$ = 38° 9.5′ W **S_o (13° 38.4′ S , 38° 9.5′ W)**

g) Ver solución gráfica en gráfico 13.6.

Ejercicio 2.4.7.

a) Z = + 5 $H_{CG} = H_Z + Z = 18^h\ 25^m + 5^h = 23^h\ 25^m$ (4)

b) $a_{obs} = a_{i\star} + C_i$ = 41° 54.1′ – 5′ = 41° 49.1′

$C_{xdep} = -1.78 \times \sqrt{15} = -6.9'$ $C_{xr} = -1.2'$ $\Sigma C = -8.1'$

$a_{v\star} = a_{obs} + \Sigma C$ = 41° 49.1′ - 8.1′ = 41° 41′

c) AS = 15° 25.4′ d = - 29° 33.5′

d) $h_{G\gamma}$ = 88° 58′ + 15° 2.5′ x 25 / 60 = 95° 14′

$h_{G\star} = h_{G\gamma} + AS$ = 95° 14′ + 15° 25.4′ = 110° 39.4′

$h_{L\star} = h_{G\star} - L_e$ = 110° 39.3′ - 81° 20′ = 29° 19.4′ $P_\star$ = 29° 19.3′ W

e) a_e = arcsen (sen d x sen l_e + cos d x cos l_e x cos P) = 41° 37.5′ $\Delta a = a_v - a_e = +3.5'$

Z = arctan [sen P / (tan d x cos l_e – sen l_e x cos P)] = - 34.7° Z = S 34.7 W

Fomalhaut 2325(4)	**l_e = 9° 43′ N** **L_e = 81° 20′ W** **Z = S 34.7 W** **Δa = + 3.5′**

f) $\Delta l = \Delta a$ x cos Z = 2.9′ S $l_o = l_e + \Delta l$ = 9° 40.1′ N $l_m = (l_o + l_e)/2$ = 9° 41.5′ N

$\Delta L = \Delta a$ x sen Z /cos l_m = 2′ W $L_o = L_e + \Delta L$ = 81° 22′ W **S_o (9° 40.1′ N , 81° 22′ W)**

g) Ver solución gráfica en gráfico 13.7.

Ejercicio 2.4.8.

a) Z = - 1 $H_{CG} = H_Z + Z = 17^h\ 35^m - 1^h = 16^h\ 35^m$ (26)

b) $a_{obs} = a_{i\star} + C_i$ = 27° 43′ + 6.2′ = 27° 49.2′

$C_{xdeP} = -1.78 \times \sqrt{14} = -6.7'$ $C_{xr} = -1.8'$ $\Sigma C = -8.5'$

$a_{v\star} = a_{obs} + \Sigma C$ = 27° 49.2′ - 8.5′ = 27° 40.7′

c) AS = 145° 55.9′ d = + 19° 7.5′

d) $h_{G\gamma}$ = 155° 10.9′ + 15° 2.5′ x 35 / 60 = 163° 57.4′

$h_{G\star} = h_{G\gamma} + AS$ = 163° 57.4′ + 145° 55.9′ = 309° 53.3′

$h_{L\star} = h_{G\star} - L_e$ = 309° 53.5′ + 20° 9′ = 330° 2.3′ $P_\star$ = 29° 57.7 E

e) a_e = arcsen (sen d x sen l_e + cos d x cos l_e x cos P) = 27° 42.9′ $\Delta a = (a_v - a_e) = -2.2'$

Z = arctan [sen P / (tan d x cos l_e – sen l_e x cos P)] = + 32.2° Z = N 32.2 E

Arcturus 1635(20)	**l_e = 36° 21′ S** **L_e = 20° 9′ E** **Z = N 32.2 E** **Δa = - 2.2′**