

ASTRO NAVIGATION SIGHT REDUCTION FORM

using *Sight Reduction Tables for Air Navigation*

Date 12/5/08 Body Sun Limb U / (L) Log 3847.6

Times spot mean: <u>10 20 00</u> <u>10 19 12</u> +/- <u>- 48</u> <u>10 19 56</u> +/- <u>- 4</u> <u>10 20 47</u> +/- <u>+ 47</u> <u>10 21 04</u> +/- <u>+ 64</u> <u>10 21 34</u> +/- <u>+ 94</u> sum <u>+ 163</u> sum/n <u>+ 33</u>	Angles spot mean: <u>40 35</u> <u>40 23</u> +/- <u>- 12</u> <u>40 29</u> +/- <u>- 6</u> <u>40 36</u> +/- <u>+ 1</u> <u>40 41</u> +/- <u>+ 6</u> <u>40 43</u> +/- <u>+ 8</u> sum <u>- 3</u> sum/n <u>- 1</u>
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Mean (watch) <u>10 20 33</u> Zone adj <u>-1</u> (BST) watch corr <u>+23</u> (23s slow) U T <u>09 20 56</u>	Mean (sextant) <u>40 34</u> I E <u>+ 4</u> (4' OFF) Dip <u>- 2.5</u> App Alt <u>40 35.5</u> Alt corr 1 <u>+ 14.9</u> Alt corr 2 _____ U Limb corr _____ -30' True Alt H₀ <u>40 50.4</u>
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HP
 Dec (09 h) (N) S 18 16.3
 d 0.6 (20m) + 0.2
Dec (N) S 18 16.5
 G H A (09 h) 315 54.7
 Increment (20m 56s) 5 14.0
 v _____ (m) _____
 G H A 321 08.7

Ass Long E / (W) 9 08.7 (E +)
L H A 312 00' **Ass Lat** (N) S 47 00'

Ass Lat <u>47</u> L H A <u>312</u> Dec° <u>18</u> same / contrary	H _C (table) <u>41 18</u> d <u>+44</u> Z <u>110</u>
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Dec' <u>16</u> d <u>+44</u>	H _C (table) <u>41 18</u> correction <u>+12</u> H _C <u>41 30</u>
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True Alt H₀ 40 50.4
Intercept 39.6 towards/away

Z 110
Zn 110

N Latitude: if L H A > 180° Zn = Z
 if L H A < 180° Zn = 360° - Z
 S Latitude: if L H A > 180° Zn = 180° - Z
 if L H A < 180° Zn = 180° + Z

Meridian Passage:

True Alt H₀ _____ 90 - H ₀ _____ Dec _____ same / contrary _____ Latitude _____	- ve if observation towards pole + if same - if contrary
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