Solar Energy Engineering
Processes and Systems

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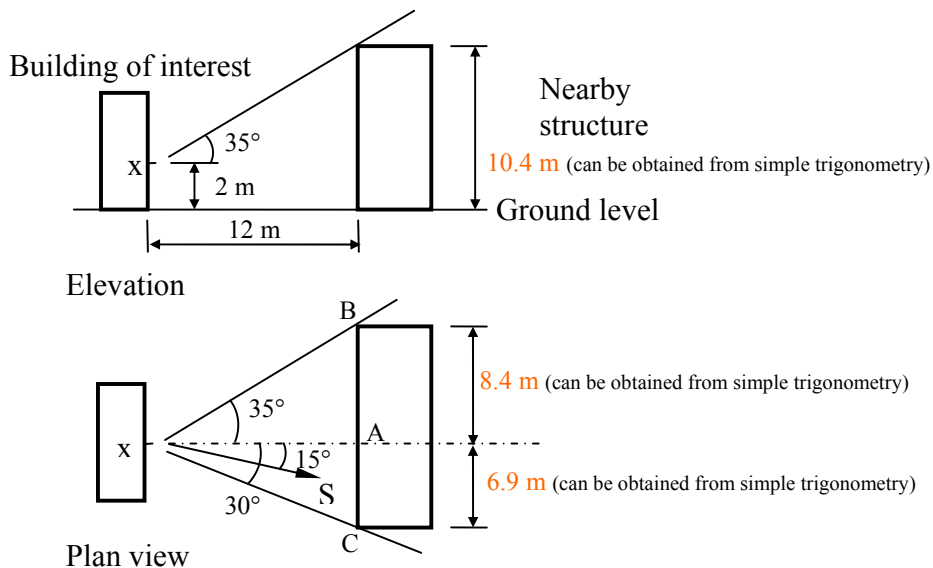
Errata

1. Page 57 last few lines.

AST = 14:30-4(30-23.66)-0:13 = 14:30-0:25-0:13 = 13:52 or 1:52 pm.

Because Athens is East of Greenwich the sign in front of longitude correction must be minus.

2. Page 71, Example 2.8. As the angles are given in Fig. 2.19 the distances should not be given. The ones shown are wrong and the correct are shown below:

Solution: The upper limit of profile angle for shading point x is 35° and 15° west of true south. This is point A drawn on the sun-path diagram as shown below. In this case the solar profile angle is the solar altitude angle. Distance x-B is $(8.4^2+12^2)^{1/2} = 14.6$ m. For the point B the altitude angle is $\tan(\alpha)=8.4/14.6 \rightarrow \alpha=29.9°$. Similarly distance x-C is $(6.9^2+12^2)^{1/2} = 13.8$ m and for point C the altitude angle is $\tan(\alpha)=8.4/13.8 \rightarrow \alpha=31.3°$. Both points are as indicated in Fig. 2.20.

3. Page 238, Table 4.4.Units in column 4 should be °C-m^2/W.