

Errata for Practical Astronomy with your Calculator or Spreadsheet Version 1.0

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Page xix In line 17, ‘to its left’ → ‘to its right’.

Page 2 In the last line, ‘millions’ → ‘thousands’.

Page 63 The matrix transformation for $(l, b) \rightarrow (\alpha, \delta)$ coordinates should be:

$$\mathbf{D}' : \begin{pmatrix} m \\ n \\ p \end{pmatrix}_{\alpha, \delta} \begin{pmatrix} -0.066\,988\,8 & 0.492\,728\,5 & -0.867\,600\,8 \\ -0.872\,755\,7 & -0.450\,346\,9 & -0.188\,374\,6 \\ -0.483\,538\,9 & 0.744\,584\,6 & 0.460\,199\,8 \end{pmatrix} \cdot \begin{pmatrix} x \\ y \\ z \end{pmatrix}_{l, b},$$

i.e. the inverse to that of \mathbf{D} (as in the third edition).

Page 68 In Figure 35, x should read v , and y and ΔA should be deleted.

Page 69 In step 7 of the method table, the result for A_s should be 295.637 652 degrees rather than 296.637 652 degrees.

Page 110–111 In each of Figures 56 and 57 (and in the two corresponding spreadsheets), cell B12 should read Gday.

Pages 123, 130 In Table 8, and in cell D9 of the Planet Data spreadsheet (Figure 67), the longitude at epoch 2010.0 for Uranus should be $\varepsilon = 356.135\,400$ degrees.

Page 166 In step 2 of the method table, using a calculator one obtains a value of $M_{\odot} = 236.642\,435$ degrees. As explained in the book, sometimes we have cheated and employed a spreadsheet: in this case we have used MoonPos1 (Figure 84 on page 168) to calculate M_{\odot} , giving instead 238.533 547 degrees, or 4.163 196 radians, as in cell C18 of Figure 84.

Spreadsheets There is a bug in the functions eTwilight and TwilightPMLC. The declaration of the parameter ‘TT’ should be changed from ‘double’ to ‘string’ in the header of each of the macros. Do this as follows. In Microsoft *Excel*:

- (a) In the standard toolbar select Tools > Macro > Visual Basic Editor.
- (b) In the '(declarations)' box, click on the down arrow on the right and select 'eTwilight'.
- (c) Change 'TT As Double' to 'TT As String'.
- (d) Repeat (b) and (c) with 'TwilightPMLC' instead of 'eTwilight'.
- (e) Close the spreadsheet and answer 'yes' to the 'Save Changes' question.

When you re-open the spreadsheet, the bug should have been corrected. In OpenOffice *Calc*:

- (a) In the standard toolbar select Tools > Macros > Organise Macros > OpenOffice.org Basic.
- (b) Select 'eTwilight' and 'Edit'.
- (c) Change 'TT As Double' to 'TT As String'.
- (d) Repeat (b) and (c) with 'TwilightPMLC' instead of 'eTwilight'.
- (e) Close the spreadsheet and answer 'Save' to the 'Save Changes' question.

When you re-open the spreadsheet, the bug should have been corrected.

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