

Corrections (Roger Ekseth, PhD thesis 1998)

- Page 12 Line 2+3 from bottom *co-ordinate vector at station j should be the co-ordinate difference vector between station j-1 and j*
- Page 13 Equation {3.1-8} line 1  $\epsilon_X \epsilon_X^T \approx [(\partial f_1 / \partial I_0)^2 \epsilon_{I_0}^2 + (\partial f_1 / \partial A_0)^2 \epsilon_{A_0}^2 + (\partial f_1 / \partial D_0)^2 \epsilon_{D_0}^2]$
- Page 25 Equation {3.5-2} all ...  $\sum_{j=j+1}^{j+k_1}$  [...] should be ...  $\sum_{j=\sum_{l=1}^k (k_l)+1}^{\sum_{l=1}^k (k_l)}$  [...]
- Page 54 Equation {5.1.1.3-2} second line should be  $\approx \sqrt{\frac{d\eta_a^2}{G^2 \sin^2 I} + 2 \sin^2 \tau \cos^2 \tau dv_a^2}$
- Page 64 Line 2 chapter 5.2.1.1 *true magnetic north should be true north*
- Page 89 Equation {6.1.1.3-2}  $d\tau \approx \sqrt{\frac{d\eta_a^2}{G^2 \sin^2 I} + 2 \sin^2 \tau \cos^2 \tau dv_a^2}$
- Page 92 Equation {6.1.1.4-7}  $T_{x,\tau+180} \approx -\Omega \cos \phi (\cos I \cos A \cos \tau - \sin A \sin \tau) - \Omega \sin \phi \sin I \cos \tau$   
Equation {6.1.1.4-13}  $T_{y,\tau+180} \approx \Omega \cos \phi (\cos I \cos A \sin \tau + \sin A \cos \tau) + \Omega \sin \phi \sin I \sin \tau$
- Page 93 Line 1 *earth angular rate at the equator should be earth angular rate*
- Page 94 Equation {6.1.1.4-26}  $T_{z,\tau+180} \approx -\Omega \cos \phi (\cos I \cos A \sin \tau + \sin A \cos \tau) - \Omega \sin \phi \sin I \sin \tau$   
Equation {6.1.1.4-32}  $T_{z,\tau+270} \approx \Omega \cos \phi (\cos I \cos A \cos \tau - \sin A \sin \tau) - \Omega \sin \phi \sin I \cos \tau$
- Page 119 Equation {7.1-3}  $dD_I = i_s d\beta_z$   
Equation {7.1-4}  $dD_{II} = i_s \sqrt{d\beta_1^2 + d\beta_2^2}$
- Page 120 Line 2 paragraph 4 *and 0°C. should be and the surface reference temperature for thermal drill string expansion.*
- Page 124 Equation {7.2.4-4}  $dD_X = 0.125 dD_{IX}$
- Page 126 Equation {7.2.5-6}  $dD_{XIV} = 0.5 dD_{XIII}$
- Page 141 Equation {8.1.1-8}  $d\tau \approx \sqrt{\frac{d\eta_a^2}{G^2 \sin^2 I} + 2 \sin^2 \tau \cos^2 \tau dv_a^2}$   
Equation {8.1.1-9} line 2  $\approx -(\Delta\tau_j \cos I_j + \Delta t (\omega_{xj} \sin \tau_j + \omega_{yj} \cos \tau_j) \sin I_j - \Delta t \omega_{zj} \cos I_j - \Delta t \Omega \sin \phi)$
- Page 144 Equation {8.1.2-<sup>2</sup>3}  $dA_7 = \frac{\partial A}{\partial I} dI + \frac{\partial A}{\partial \tau} d\tau \approx \frac{\sin \phi}{\cos \phi} dI - \cos I d\tau$
- Page 147 Line 2 paragraph 3 *factor is 2.49 should be factor is 2.45*

- 143 Last line {8.1.1-13} to {8.1.1-7} should be {6.1.1.1-23} to {6.1.1.1-11}
- 145 Second line after 8.1.2-15 {8.1.1-13} to {8.1.1-6} should be {6.1.1.1-23} to {6.1.1.1-10}
- 109 Eq. {6.1.1.6-56}  $\Delta A_i$  should be  $\Delta A_j$
- 69 Eq. {5.2.2.1-23} Squaring of one denominator missing

108 Eq {6.1.1.6-45}  $dA_{16j} \approx dA_{16j-1} \div \frac{A}{\sin I_j} \cdot dI_{C21}$

6.1.1.5 -10 } *strik* *scale code*  
 -11 } *= delete last term*

-10  $\frac{d\dot{i}_x}{d\dot{i}_y} \rightarrow dg_x$   
 -11  $\frac{d\dot{i}_x}{d\dot{i}_y} \rightarrow dg_y$