$$n = \frac{\left[1 + \left(\frac{\varepsilon^2}{2}\right)\sin^2 \beta_1\right]\left[\left(\sin^2 \beta_1\right)\left(\cos\theta\right) + g \cdot \left(\sin\beta_1\right)\left(\sin\theta\right)\right]}{2} \qquad \text{(Equation A8)}$$