$$\delta = \sqrt{\frac{1010}{f_0}}\, 10^{\left(\log \mathrm{H} - 1.328924 + 3.179768\times 10^{-2}\theta\right)}$$

$$\times 10^{\left(-2.173716\times 10^{-4}\theta^2 + 1.7496\times 10^{-6}\theta^3\right)}$$