

5. The horizontal component of the Earth's magnetic field is given by  $B_h = B \cos \phi_i$ , where  $B$  is the magnitude of the field and  $\phi_i$  is the inclination angle. Thus

$$B = \frac{B_h}{\cos \phi_i} = \frac{16 \mu\text{T}}{\cos 73^\circ} = 55 \mu\text{T} .$$