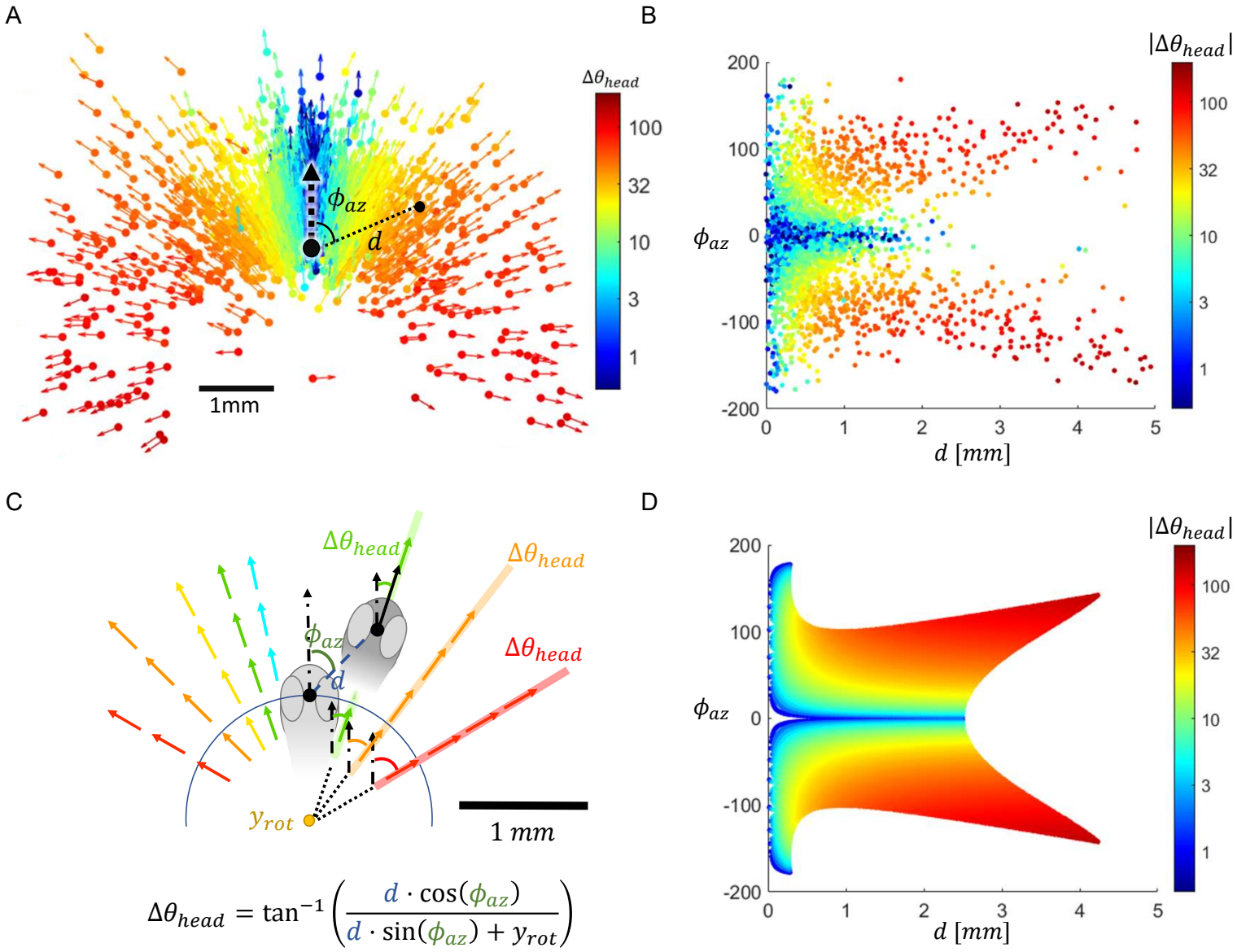

$$\Delta\theta_{head} = \tan^{-1}\left(\frac{d \cdot \cos(\phi_{az})}{d \cdot \sin(\phi_{az}) + y_{rot}}\right)$$