Target Distance: 90cm

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Errors of >4.5° (for this target, beyond the yellow circle) are likely to be significant.
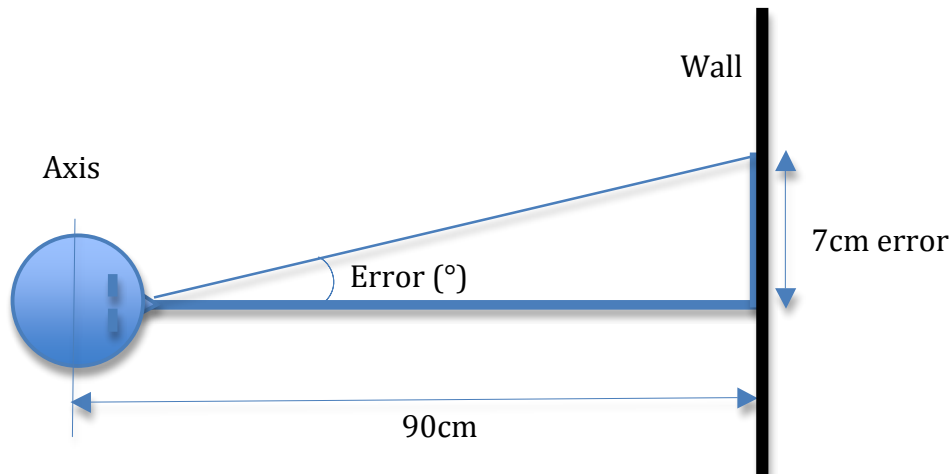
> Treleaven J, Jull G, Sterling M. **Dizziness and unsteadiness following whiplash injury: characteristic features and relationship with cervical joint position error.** J Rehabil Med. 2003 Jan;35(1):36-43.

Distance from center of the target to a 4.5-degree error depends the distance the patient is from the target. This target is calibrated for a patient who is 90 cm away.

If the patient (center of axis of rotation to the target, thus, the crown of the head) is 90 cm from the target, then a 7 cm error from the center of the target translates to a 4.5 degree error:

Arctan of 7cm/90cm = 4.5 degrees

On a calculator, arctan is often shown as $\tan^{-1}$.

So, the error in degrees is the arctan (or $\tan^{-1}$) of 7/90, or 4.5°.