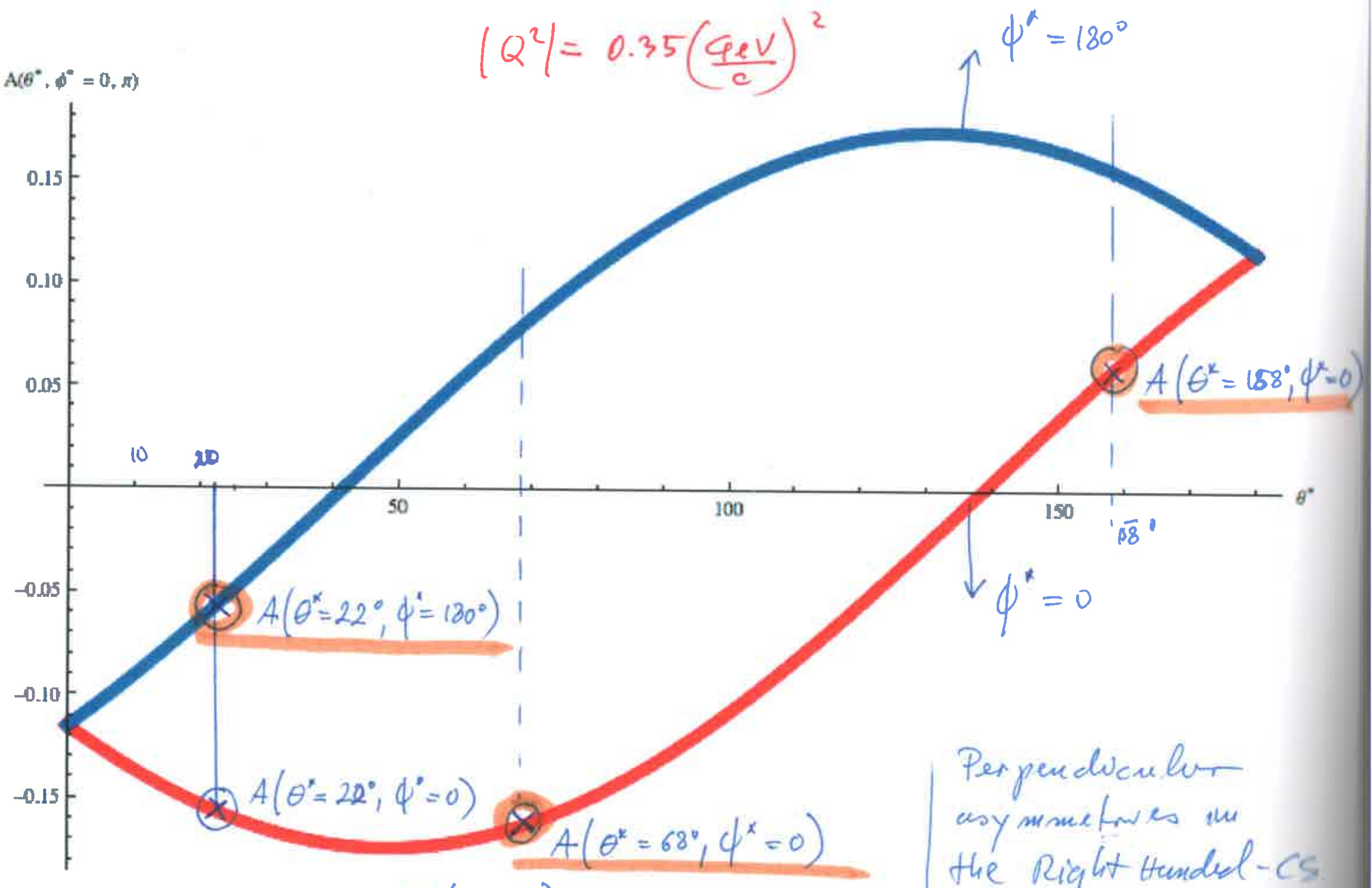

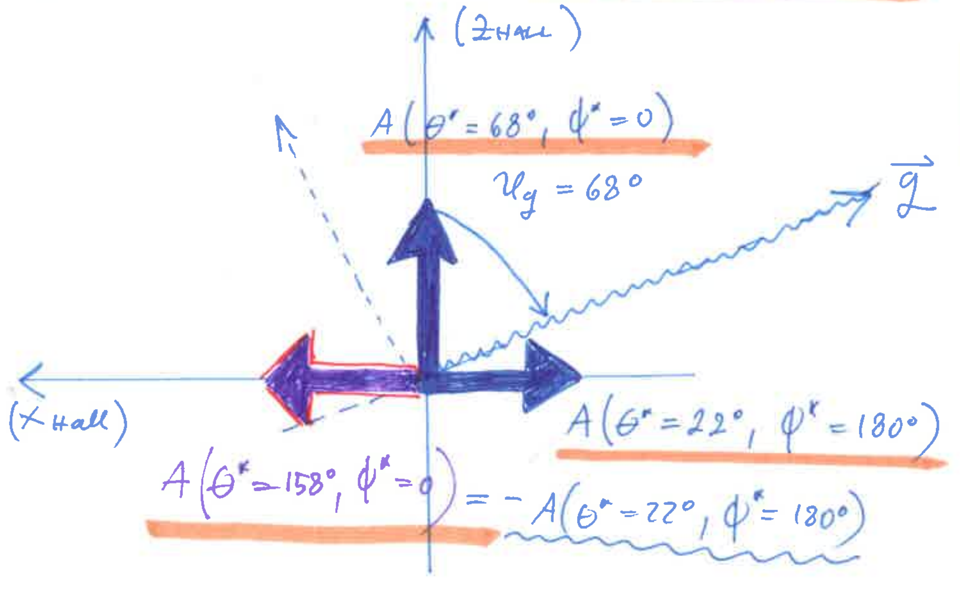

Perpendicular asymmetries in the Right Handed-CS are:

$A(\theta^* = 22°, \phi^* = 180°)$

$A(\theta^* = 68°, \phi^* = 0°)$

Directly measured asymmetries:

$A(\theta^* = 68°, \phi^* = 0°)$

$A(\theta^* = 158°, \phi^* = 0°)$

These two asymmetries are on the same curve

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Question: $A_e(\theta^* = 158°, \phi^* = 0) = - A_e(\theta^* = 22°, \phi^* = 180°)$?

①

$$A_e(\theta^* = 22°, \phi^* = 180°) = - \frac{2\tau\, v_T' \cos\theta^* G_M^{p\,2} - 2\sqrt{2\tau(1+\tau)}\, v_{TL}' \sin\theta^* (-1) G_M^p G_E^p}{[\ldots]}$$

$$= - \frac{2\tau\, v_T' \cos\theta^* G_M^{p\,2} + 2\sqrt{2\tau(1+\tau)}\, v_{TL}' \sin\theta^* G_M^p G_E^p}{[\ldots]}$$

②

$$A_e(\tilde{\theta}^* = 158°, \phi^* = 0) = - \frac{2\tau\, v_T' \cos\tilde{\theta}^* G_M^{p\,2} - 2\sqrt{2\tau(1+\tau)}\, v_{TL}' \sin\tilde{\theta}^* G_M^p G_E^p}{[\ldots]}$$

$\tilde{\theta}^* = 180° - \theta^*$:

$$\boxed{\begin{aligned} \cos\tilde{\theta}^* &= \cos(\pi - \theta^*) = -\cos(\theta^*) \\ \sin\tilde{\theta}^* &= \sin(\pi - \theta^*) = \sin(\theta^*) \end{aligned}}$$

$$= - \frac{-2\tau\, v_T' \cos\theta^* G_M^{p\,2} - 2\sqrt{2\tau(1+\tau)}\, v_{TL}' \sin\theta^* G_M^p G_E^p}{[\ldots]}$$

$$= (-)\left(- \frac{2\tau\, v_T' \cos\theta^* (G_M^p)^2 + 2\sqrt{2\tau(1+\tau)}\, v_{TL}' \sin\theta^* G_M^p G_E^p}{[\ldots]} \right)$$

$$= - A_e(\theta^* = 22°, \phi^* = 180°)$$ qed.

I directly measure two points:

$A(\theta^* = 152^\circ, \phi^* = 0)$ and $A(\theta^* = 68^\circ, \phi^* = 0)$

I can fit these two points with the following function:

$$\underbrace{A_c}_{\substack{\text{Proton asymmetry}\\ \text{inside } ^3He \text{ at}\\ p_{miss}=0.}}\Big(\underbrace{\theta^*}_{\text{variable}}\,;\,\underbrace{f}_{\substack{\text{fitting}\\ \text{parameter}}}\,;\,\underbrace{Q^2, \phi^*=0}_{\substack{\text{fixed}\\ \text{parameters}}}\Big) = f \cdot \underbrace{\left[\frac{2\tau v_T' \cos\theta^* G_M^{p\,2} - 2\sqrt{2\tau(1+\tau)}\, v_{TL}' \sin\theta^* \cos\phi^* (G_E^p G_M^p)}{[\ldots\ldots]}\right]}_{\text{Elastic Proton Asymmetry}}$$

This parameter depends on proton polarization inside ^3He.
According to Friar:

$$f = P_p \cdot F_p \; ; \; F_p = \frac{2\sigma_p}{\sigma_n + 2\sigma_p}$$