Interchange between A_{-90} and A_{80}

Rearranging the factors by common kinematic terms we have

$$A_1 = \frac{1}{D'}\left(\frac{E - E'\cos\theta}{E + E'}A_{180} + \frac{E'\sin\theta}{(E+E')\cos\phi}\frac{A_{180}\cos 80^\circ + A_{80}}{\sin 80^\circ}\right)$$

$$A_2 = \frac{1}{D'}\frac{1}{2E}\left(\sqrt{Q^2}A_{180} - \sqrt{Q^2}\frac{E - E'\cos\theta}{E'\sin\theta\cos\phi}\frac{A_{180}\cos 80^\circ + A_{80}}{\sin 80^\circ}\right)$$

where the term $(A_{180}\cos 80^\circ + A_{80})/\sin 80^\circ$ is similar to what Hovhannes Baghdasaryan[3] has been calling $A_{90}(0)$, but here it applies at all values of ϕ, not just over a restricted range. Because we took data at 80° we have a linear combination of A_{90} and A_{180}: $A_{80} = A_{90}\sin 80^\circ - A_{180}\cos 80^\circ$. The kinematic factor in front of this "A_{90}" must come from the 80° data.

(Rondon, Simpified Expressions to get A1 and A2 from A80 and A180 in SANE)

Changing 80° to -90° should be the same as below formula:

$$A_1 = \frac{1}{(E+E')D'}\left((E - E'\cos\theta)A_\parallel - \frac{E'\sin\theta}{\cos\phi}A_\perp\right)$$

$$A_2 = \frac{\sqrt{Q^2}}{2ED'}\left(A_\parallel + \frac{E - E'\cos\theta}{E'\sin\theta\cos\phi}A_\perp\right)$$

(Rondon RSS technote # 2003-01 Feb. 2005)

So, if I want to use RSS radiative correction code correctly, the following can be the good corresponding part:

$$A_\perp = -\frac{A_{180}cos80^\circ + A_{80}}{sin80^\circ} = A_{-90}$$

Unlike Hovhannes' A90(0), it does not have $\cos(\phi)$ part, and have negative sign to match it with RSS definition.