$$\mathbf{v}_{fit}(\mathbf{r}) = - U_0\,\hat{\mathbf{y}} - \frac{A_{St}}{r}\left(\mathbf{I} + \hat{\mathbf{r}}\hat{\mathbf{r}}\right)\cdot\hat{\mathbf{y}} \qquad (1)$$

$$+ \frac{A_{str}}{r^2}\left(1 - 3(y/r)^2\right)\hat{\mathbf{r}} - \frac{A_{sd}}{r^3}\left(\frac{\mathbf{I}}{3} - \hat{\mathbf{r}}\hat{\mathbf{r}}\right)\cdot\hat{\mathbf{y}}$$