

$$V = \begin{pmatrix} V_1 \\ V_2 \\ V_3 \end{pmatrix} = \begin{pmatrix} 1 & 0 & r \\ -1/2 & \sqrt{3}/2 & r \\ -1/2 & \sqrt{3}/2 & r \end{pmatrix} \begin{pmatrix} V_{\chi} \\ V_{y} \\ V_{\theta} \end{pmatrix}$$