

Correction of Polarization Cross-talk

Kuhn et al. (1994) assumes $I \leftrightarrow QU$ and $Q \leftrightarrow U$ are small, and cross-talk is a combination of only linear terms.

Solve first for antisymmetric V through regression:

$$V = V_o - aQ_o - bU_o$$

we use Matt's routine :)

Then solve for symmetric Q and U :

$$Q = Q_o - cV$$

$$U = U_o - dV$$

Resulting coefficients of the inverse Muller matrix:

$$M^{-1} = \begin{pmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 + ac & ad & -a \\ 0 & bc & 1 + bd & -b \\ 0 & -c & -d & 1 \end{pmatrix}$$

