The (possibly singular) *a*-matrices associated with the Lagrangian, as defined below Eq. (18) of arXiv:1812.02675:

Matrix for spin-0 sector:

$$\begin{pmatrix} 0 & -\sqrt{3}\,\alpha_{2} \\ -\sqrt{3}\,\alpha_{2} & -2\,\alpha_{2} + \alpha_{1}\,k^2 \end{pmatrix}$$

Matrix for spin-1 sector:

$$\begin{pmatrix} \alpha_{2} \end{pmatrix}$$

Matrix for spin-2 sector:

$$\begin{pmatrix} \alpha_{2} - \frac{\alpha_{1}\,k^2}{2} \end{pmatrix}$$

Gauge constraints on source currents:

The Drazin (Moore-Penrose) inverses of these *a*-matrices, which are functionally analogous to the inverse *b*-matrices described below Eq. (21) of arXiv:1812.02675:

Matrix for spin-0 sector:

$$\begin{pmatrix} \frac{2\,\alpha_{2} - \alpha_{1}\,k^2}{3\,\alpha_{2}^{2}} & -\frac{1}{\sqrt{3}\,\alpha_{2}} \\ -\frac{1}{\sqrt{3}\,\alpha_{2}} & 0 \end{pmatrix}$$

Matrix for spin-1 sector:

$$\begin{pmatrix} \frac{1}{\alpha_{2}} \end{pmatrix}$$

Matrix for spin-2 sector:

$$\begin{pmatrix} \frac{1}{\alpha_{2} - \frac{\alpha_{1}\,k^2}{2}} \end{pmatrix}$$

Square masses:

$$\left\{\{\}, \{\}, \{\}, \{\}, \left\{\frac{2\,\alpha_{2}}{\alpha_{1}}\right\}, \{\}\right\}$$

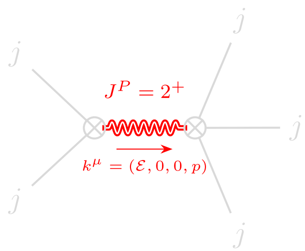
Massive pole residues:

$$\left\{\{\}, \{\}, \{\}, \{\}, \left\{-\frac{2}{\alpha_{1}}\right\}, \{\}\right\}$$

Massless eigenvalues:

{}

Overall particle spectrum:



Massive particle

Pole residue:	$-\frac{2}{\alpha_{1}} > 0$
Square mass:	$\frac{2\,\alpha_{2}}{\alpha_{1}} > 0$
Spin:	2
Parity:	Even

Overall unitarity conditions:

$\alpha_{1} < 0$ && $\alpha_{2} < 0$