

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

Matrix for spin-0 sector:

$$(0)$$

Matrix for spin-1 sector:

$$\left(2\alpha_{\textcolor{red}{1}}k^2\right)$$

Gauge constraints on source currents:

$$\textcolor{blue}{0}^{\textcolor{blue}{\cdot}}\mathcal{J}==0$$

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:

$$(0)$$

Matrix for spin-1 sector:

$$\left(\frac{1}{2\alpha_{\textcolor{blue}{1}}k^2}\right)$$

Square masses:

$$\{\emptyset,\emptyset,\emptyset,\emptyset\}$$

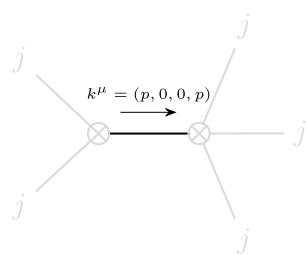
Massive pole residues:

$$\{\emptyset,\emptyset,\emptyset,\emptyset\}$$

Massless eigenvalues:

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

Overall particle spectrum:



Massless particle

Pole residue:	$-\frac{1}{\alpha_{\textcolor{red}{1}}}>0$
Polarisations:	2

Overall unitarity conditions:

$$\alpha_{\textcolor{blue}{1}}<0$$