

MASSLESS REPRESENTATION

$$p^\mu = (E, 0, 0, E)$$

$$\{Q_\alpha^I, \bar{Q}_{\dot{\alpha}}^J\} = 4E\delta^{IJ} \begin{pmatrix} 1 & 0 \\ 0 & 0 \end{pmatrix}$$

$$a^I = \frac{1}{\sqrt{4E}} Q_1^I, \quad (a^I)^\dagger = \frac{1}{\sqrt{4E}} \bar{Q}_1^I$$