Using a unary negative sign in front of a vector works as expected for numeric evaluation, but is doing something very strange with symbolic eval. Here's a simple numeric example evaluated both ways, with S defined using the unary negative (as normally done).

$$R := \begin{pmatrix}1\\2\\3\end{pmatrix} \qquad S := -R \qquad R + S = \begin{pmatrix}0\\0\\0\end{pmatrix}$$

using S as -R:

$$R + S \rightarrow \begin{bmatrix}\begin{pmatrix}0\\-1\\-2\end{pmatrix}\\\begin{pmatrix}1\\0\\-1\end{pmatrix}\\\begin{pmatrix}2\\1\\0\end{pmatrix}\end{bmatrix}$$

adding - sign explicitly:

$$-\begin{pmatrix}1\\2\\3\end{pmatrix} + \begin{pmatrix}1\\2\\3\end{pmatrix} \rightarrow \begin{bmatrix}\begin{pmatrix}0\\-1\\-2\end{pmatrix}\\\begin{pmatrix}1\\0\\-1\end{pmatrix}\\\begin{pmatrix}2\\1\\0\end{pmatrix}\end{bmatrix}$$

single term:

$$-\begin{pmatrix}1\\2\\3\end{pmatrix} \rightarrow -\begin{pmatrix}1\\2\\3\end{pmatrix}$$

$$R \rightarrow \begin{pmatrix}1\\2\\3\end{pmatrix}$$

All works well if explicit -1 multiplier:

$$T := -1 \cdot R \qquad R + T = \begin{pmatrix}0\\0\\0\end{pmatrix} \qquad R + T \rightarrow \begin{pmatrix}0\\0\\0\end{pmatrix} \qquad -1\cdot\begin{pmatrix}1\\2\\3\end{pmatrix} + \begin{pmatrix}1\\2\\3\end{pmatrix} \rightarrow \begin{pmatrix}0\\0\\0\end{pmatrix}$$

scalar

$$(3) - (3) \rightarrow 0$$

$$(-3) - (3) \rightarrow -6$$

$$-(3) - (3) \rightarrow -6$$

vector

$$\begin{pmatrix}1\\2\end{pmatrix} - \begin{pmatrix}1\\2\end{pmatrix} \rightarrow \begin{pmatrix}0\\0\end{pmatrix} \qquad -\begin{pmatrix}1\\2\end{pmatrix} - \begin{pmatrix}1\\2\end{pmatrix} = \begin{pmatrix}-2\\-4\end{pmatrix} \qquad -\begin{pmatrix}1\\2\end{pmatrix} - \begin{pmatrix}1\\2\end{pmatrix} \rightarrow \begin{bmatrix}\begin{pmatrix}-2\\-3\end{pmatrix}\\\begin{pmatrix}-3\\-4\end{pmatrix}\end{bmatrix}$$