We may now compare the FDA written above to that obtained in the AdS$_6$ case, which for convenience we reproduce below,

$$
\begin{aligned}
0 &= \mathcal{D}V^a - \frac{i}{2}\bar{\psi}_A\gamma^a\psi^A \\
0 &= R^{ab} + 4m^2V^aV^b + m\bar{\psi}_A\gamma^{ab}\psi^A \\
0 &= dA^r - \frac{1}{2}g\epsilon^{rst}A_sA_t - i\bar{\psi}_A\psi_B\sigma^{r\ AB} \\
0 &= D\psi_a - im\gamma_a\psi_AV^a \\
0 &= dA - mB - i\bar{\psi}_A\gamma_7\psi^A \\
0 &= dB + 2\bar{\psi}_A\gamma_7\gamma_a\psi^AV^a
\end{aligned}
\tag{1}
$$

We see that formally, we may obtain the $\mathbb{H}_6$ FDA from the AdS$_6$ FDA by exchanging

$$m \to -im \qquad \psi_A \to \psi_A \qquad \bar{\psi}_A \to i\bar{\psi}_A \qquad A^r \to iA^r \qquad g \to -ig \qquad B \to -B \qquad A \to iA$$

These exchanges are compatible with the relation $g = 3m$. Finally, we will check that the $\mathbb{H}_6$ FDA is compatible with the symplectic Majorana condition. This is a statement about the fourth equation of . We begin by defining

$$\nabla\psi_A \equiv D\psi_A - q\gamma_a\psi_AV^a \tag{2}$$

where $q = m$ for $\mathbb{H}_6$ and $q = im$ for AdS$_6$. We then find that

$$
\begin{aligned}
\overline{\nabla\psi_A} &= D\psi_A^\dagger G^{-1} - q^*\psi_A^\dagger G^{-1}G\gamma_a^\dagger G^{-1}V^a = D\bar{\psi}_A - q^*\eta\,\bar{\psi}_A\gamma_aV^a \\
\epsilon^{AB}\nabla\psi_B^T\mathcal{C} &= \epsilon^{AB}D\psi_B^T\mathcal{C} - q\epsilon^{AB}\psi_B^T\mathcal{C}\mathcal{C}^{-1}\gamma_a^T\mathcal{C}V^a = D\bar{\psi}_A + q\bar{\psi}_A\gamma_aV^a
\end{aligned}
\tag{3}
$$

where η is defined implicitly in . We thus find that the symplectic Majorana condition is consistent only when

$$-q^*\eta = q \tag{4}$$

For $\mathbb{H}_6$, the consistency of the symplectic Majorana condition thus requires $\eta = -1$, which we have already seen to be the case in . On the other hand, in the AdS$_6$ case, one would instead have required $\eta = 1$. Checking the results of confirms that this was so.