$$ {}_{u_\ell - e:e}\underset{\omega}{\Subset}\big|_{\mho}\mathbb{L} = \underset{\omega}{\overset{\bullet}{\Subset}}{}_1\big|_{\mho}\mathbb{L} \times {}_{u_\ell - e}\underset{\omega}{\overset{\bullet}{\Subset}}{}_{-}\big|_{\mho}\mathbb{L} \times \sum_{\ell < i < j \leqslant r} \underset{\omega}{\overset{1}{\Subset}}{}_{j-i}\big|_{\mho}\mathbb{L} \times \sum_{i < j > \ell} \underset{\omega}{\overset{-}{\Subset}}{}_{j-i}\big|_{\mho}\mathbb{L} $$

$$ {}_{u_\ell - e}\underset{\omega}{\overset{\bullet}{\Subset}}{}_{-}\big|_{\mho}\mathbb{L} = \mathbb{K}\frac{e_k - \overset{*}{\mathring{e}}_k}{k > \ell} $$

$$ (u_\ell - e)\,\delta = -\sum_{k > \ell} e_k \delta = 0 $$

$$ (u_\ell - e)\ X^-_{e_k} = e_k - (u_\ell - e)\ \overset{*}{\mathring{e}}_k\ (u_\ell - e) = \begin{cases} e_k & k \leqslant \ell \\ 0 & k > \ell \end{cases} $$

$$ (u_\ell - e)\ \overbrace{X^-_a + \varkappa|\{i{:}j\}|\underbrace{\overset{*}{\mathring{a}}e_j - \overset{*}{\mathring{e}}_j a}} = a - (u_\ell - e)\ \overset{*}{\mathring{a}}\ (u_\ell - e) + \varepsilon i \sharp j\left((u_\ell - e)\ \overset{*}{\mathring{a}}e_j - (u_\ell - e)\ \overset{*}{\mathring{e}}_j a\right) = $$

$$ \begin{cases} a - \overset{*}{\mathring{a}} + 2\varkappa\,(-\overset{*}{\mathring{a}}/2 + a/2) = (1+\varkappa)\,(1-\varepsilon)\,a & \ell < i < j \\ a - \overset{*}{\mathring{a}} + \varkappa\,(-\overset{*}{\mathring{a}} + a) = (1+\varkappa)\,(1-\varepsilon)\,a & \ell < i = j \\ a + 2\varkappa a/2 = (1+\varkappa)\,a & 0 \leqslant i \leqslant \ell < j \\ a & 0 \leqslant i \leqslant j \leqslant \ell \end{cases} $$

$$ A = \sum_k \lambda^k X^-_{e_k} \Longrightarrow \underbracket{\ltimes_{\acute{\mathcal{H}}} A} = a\,(r-\ell)\,\underbrace{\lambda^1 + \cdots + \lambda^\ell} - a\ell\underbrace{\lambda^{\ell+1} + \cdots + \lambda^r} $$

$$ \underbracket{\ltimes_{\acute{\mathcal{H}}} \sum_k \lambda^k X^-_{e_k}} = \sum_k \lambda^k\ \underbracket{\ltimes_{\acute{\mathcal{H}}} X^-_{e_k}} = \sum_{\ell < i < j} a\underbrace{\lambda^j - \lambda^i} + \sum_{i < j > \ell} a\underbrace{\lambda^i - \lambda^j} $$

$$ = a\sum_{i \leqslant \ell < j} \underbrace{\lambda^i - \lambda^j} = a\,(r-\ell)\,\underbrace{\lambda^1 + \cdots + \lambda^\ell} - a\ell\underbrace{\lambda^{\ell+1} + \cdots + \lambda^r} $$

$$ \acute{A} = \sum_{k > \ell} \lambda^k X^-_{e_k} \Longrightarrow \underbracket{\ltimes_{\acute{\mathcal{H}}} \acute{A}} = -a\ell\underbrace{\lambda^{\ell+1} + \cdots + \lambda^r} $$

$$A = \sum_{k} \lambda^{k} X^{-}_{e_k} \Longrightarrow \underbrace{\ltimes_{\mathcal{H}} A} = \frac{2n}{r} \underbrace{\lambda^{1} + \cdots + \lambda^{\ell}} - a\ell \underbrace{\lambda^{\ell+1} + \cdots + \lambda^{r}}$$

$$\underbrace{\ltimes_{\mathcal{H}} A} - \underbrace{\ltimes_{\mathcal{H}'} A} = \sum_{1 \leqslant i < j \leqslant \ell} \left(a \underbrace{\lambda^{j} - \lambda^{i}} + a \underbrace{\lambda^{i} - \lambda^{j}} \right) + \sum_{i < j \leqslant \ell} a \underbrace{\lambda^{j} + \lambda^{i}} + \sum_{j \leqslant \ell} \underbrace{2\lambda^{j} + 2b\lambda^{j}}$$

$$= \sum_{i < j \leqslant \ell} a \underbrace{\lambda^{j} + \lambda^{i}} + \sum_{j \leqslant \ell} 2\,(1+b)\ \lambda^{j} = a \begin{bmatrix} \lambda^{2} + \lambda^{1} + \lambda^{3} + \lambda^{1} + \cdots + \lambda^{\ell} + \lambda^{1} \\ \lambda^{3} + \lambda^{2} + \cdots + \lambda^{\ell} + \lambda^{2} \\ \lambda^{\ell} + \lambda^{\ell-1} \end{bmatrix} + 2\,(1+b)\ \underbrace{\lambda^{1} + \cdots + \lambda^{\ell}} =$$

$$= a\,(\ell - 1)\ \underbrace{\lambda^{1} + \cdots + \lambda^{\ell}} + 2\,(1+b)\ \underbrace{\lambda^{1} + \cdots + \lambda^{\ell}} = \left(a\,(\ell-1) + 2\,(1+b)\right)\ \underbrace{\lambda^{1} + \cdots + \lambda^{\ell}}$$