

$$\iota_j Z \mathop{\triangleleft}_{\varpi}^{\ell} \mathbb{C} = \frac{\iota_j Z \stackrel{\gamma}{\longrightarrow} \mathbb{C}}{\bigwedge_{u}^{\iota_j Z} \bigwedge_z^{Z_u^1} \bigwedge_h^{\mathbb{C}|Z_u^1} z h \gamma = {}^{uh} N_u^{\ell z} \gamma}$$

$$\gamma \bowtie \mathfrak{z} = \int\limits_{du}^{S_j} {}^u \overline{\gamma} \, {}^u \mathfrak{z}$$

$$\iota_j Z \mathop{\triangleleft}_{\varpi}^{\ell} \mathbb{C} \stackrel{\text{rep}}{\stackrel{\text{metr}}{\longleftarrow}} K \bowtie \iota_j Z \mathop{\triangleleft}_{\varpi}^{\ell} \mathbb{C}$$

$$h\,P_u^1 = P_u^1 h \Rightarrow \, {}^{\overline{k}}hk\,P_{uk}^1 = P_{uk}^1\, {}^{\overline{k}}hk$$

$${}^{uk}\overline{{}^{\overline{k}}hk}N_{uk}^{\ell} = {}^{uh}N_u^{\ell}$$

$$\Rightarrow {}^{zh}\overline{{}^{\overline{k}}\bowtie\gamma} = {}^{zhk}\gamma = {}^{zk}\overline{{}^{\overline{k}}hk}\gamma = {}^{zk}\gamma\, {}^{uk}\overline{{}^{\overline{k}}hk}N_{uk}^{\ell} = {}^{zk}\gamma\, {}^{uh}N_u^{\ell}$$

$$\bigwedge_h^{K^{\mathbb{C}}} \underbrace{{}^*h\bowtie\gamma\bowtie\mathfrak{z}} = \gamma\bowtie \underbrace{h\bowtie\mathfrak{z}}$$

$$p \in Z \mathop{\triangleleft}_{\varpi}^{\ell \cdot \ell 0 \cdot 0} \mathbb{C} \Rightarrow \bigwedge_u^{S_j^{\mathbb{C}}} \bigwedge_z^{Z_u^1} \bigwedge_h^{\mathbb{C}|Z_u^1} z h p = {}^{uh} N_u^{\ell} z p$$

$$\begin{aligned} {}^{zh}K_w^{\ell \cdot \ell 0 \cdot 0} &= {}^zK_{w\overset{*}{h}}^{\ell \cdot \ell 0 \cdot 0} = {}^zK_{\underline{w\overset{*}{h}}P_u^1}^{\ell \cdot \ell 0 \cdot 0} = c\, {}^zN_u^{\ell} \, \underline{w\overset{*}{h}}P_u^1 \, \overline{N}_u^{\ell} \\ &= c\, {}^zN_u^{\ell} \, \underline{wP_u^1\overset{*}{h}} \, \overline{N}_u^{\ell} = c\, {}^zN_u^{\ell} \, {}^{wP_u^1}\overline{N}_u^{\ell} \, {}^{uh}\overline{N}_u^{\ell} = {}^zK_{wP_u^1}^{\ell \cdot \ell 0 \cdot 0} \, {}^{uh}N_u^{\ell} = {}^zK_w^{\ell \cdot \ell 0 \cdot 0} \, {}^{uh}N_u^{\ell} \end{aligned}$$