$$\frac{}{\tau \vdash \tau}$$

$$\frac{\Gamma, \varphi, \psi \vdash \Delta}{\Gamma, \varphi \otimes \psi \vdash \Delta} \qquad \frac{\Gamma \vdash \varphi, \Delta \qquad \Gamma' \vdash \psi, \Delta}{\Gamma, \Gamma' \vdash \varphi \otimes \psi, \Delta, \Delta'}$$

$$\frac{\Gamma, \varphi \vdash \Delta \qquad \Gamma', \psi \vdash \Delta'}{\Gamma, \Gamma', \varphi \invamp \psi \vdash \Delta, \Delta'} \qquad \frac{\Gamma \vdash \varphi, \psi, \Delta}{\Gamma \vdash \varphi \invamp \psi, \Delta}$$

$$\frac{\Gamma, \varphi \vdash \Delta}{\Gamma, !_1\varphi \vdash \Delta} \qquad \frac{!_{\vec{r}}\Gamma \vdash \varphi, ?_{\vec{e}}\Delta}{!_{r'\cdot\vec{r}} \vdash !_{r'}\varphi, ?_{\mathcal{U}(r',\vec{e})}\Delta}$$

$$\frac{\Gamma, !_r\varphi, !_s\varphi \vdash \Delta}{\Gamma !_{r+s}\varphi \vdash \Delta} \qquad \frac{\Gamma \vdash \Delta}{\Gamma, !_0\varphi \vdash \Delta}$$

$$\frac{\Gamma \vdash \varphi, \Delta}{\Gamma \vdash ?_1\varphi, \Delta} \qquad \frac{!_{\vec{r}}\Gamma, \varphi \vdash ?_{\vec{e}}\Delta}{!_{\mathcal{V}(\vec{r},e)}\Gamma, ?_e\varphi \vdash ?_{\vec{e}\cdot e}\Delta}$$

$$\frac{\Gamma \vdash ?_e\varphi, ?_{e'}\varphi, \Delta}{\Gamma \vdash ?_{e+e'}\varphi, \Delta} \qquad \frac{\Gamma \vdash \Delta}{\Gamma \vdash ?_0\varphi, \Delta}$$

$$\mathcal{U}(r_1 \cdot r_2, \vec{e}) = \mathcal{U}(r_2, \mathcal{U}(r_1, \vec{e}))$$

$$\mathcal{U}(r_1 + r_2, \vec{e}) = \mathcal{U}(r_1, \vec{e}) + \mathcal{U}(r_2, \vec{e})$$

$$\mathcal{U}(0, \vec{e}) = 0 \quad \mathcal{U}(1, \vec{e}) = \vec{e}$$

$$\mathcal{V}(r, \mathcal{U}(r', e)) = \mathcal{V}(r, e) \cdot r'$$

$$\mathcal{U}(r, \vec{e}) \cdot e = \mathcal{U}(r, e \cdot \vec{e})$$