$$\text{top VR } \text{ꞁ} \in \triangledown_0 \mathbb{K}$$

$$\text{ꞁ} \supset \text{ⱡ} \Rightarrow \text{ꞁ} \xleftarrow[\text{stet}]{j} \text{ⱡ} \in \triangledown_0 \mathbb{K}$$

$$\mathcal{T} \cap \text{ⱡ} = \frac{U \cap \text{ⱡ}}{U \in \mathcal{T}} \text{ Rel-Top } \Rightarrow j \text{ stet}$$

$$\mathcal{U} \text{ stand 0-Umgbasis von } \mathcal{T} \Rightarrow \mathcal{U} \cap \text{ⱡ} = \frac{U \cap \text{ⱡ}}{U \in \mathcal{U}} \text{ stand 0-Umgbasis von } \mathcal{T} \cap \text{ⱡ} \Rightarrow \text{ⱡ} \in \triangledown_0 \mathbb{K} \text{ top VR}$$

$$\text{ꞁ} \supset \text{ⱡ} \Rightarrow \text{ꞁ} \sqsupset \overline{\text{ⱡ}}$$

$$\text{ⱡ} \supset \text{ⱡ} + \text{ⱡ} = +\underbrace{\text{ⱡ} \times \text{ⱡ}} \Rightarrow \overline{\text{ⱡ}} \supset \overline{+\underbrace{\text{ⱡ} \times \text{ⱡ}}} \underset{+\ \text{stet}}{\supset} +\overline{\text{ⱡ} \times \text{ⱡ}} = +\underbrace{\overline{\text{ⱡ}} \times \overline{\text{ⱡ}}} = \overline{\text{ⱡ}} + \overline{\text{ⱡ}}$$

$$\text{ⱡ} \supset \text{ⱡ} \cdot \mathbb{K} = \cdot\underbrace{\text{ⱡ} \times \mathbb{K}} \Rightarrow \overline{\text{ⱡ}} \supset \overline{\cdot\underbrace{\text{ⱡ} \times \mathbb{K}}} \underset{\cdot\ \text{stet}}{\supset} \cdot\overline{\text{ⱡ} \times \mathbb{K}} = \cdot\underbrace{\overline{\text{ⱡ}} \times \mathbb{K}} = \overline{\text{ⱡ}} \cdot \mathbb{K}$$

$$\text{treu } \daleth \sqsupset \gimel \text{ voll } \Rightarrow \daleth \sqsupseteq \gimel$$

$$\lightning\ \daleth\llcorner\gimel \not\subset \daleth \Rightarrow \bigvee \urcorner \in \underbrace{\daleth\llcorner\gimel} \cap \overline{\gimel} \Rightarrow \bigwedge_{U}^{\mathcal{U}} \underbrace{\urcorner + U} \cap \gimel \neq \varnothing$$

$$\overset{\text{Ax}}{\underset{\text{Choice}}{\Longrightarrow}} \prod_{U}^{\mathcal{U}} \underbrace{\urcorner + U} \cap \gimel \neq \varnothing: \quad \bigvee_{\text{Abb}} \mathcal{U} \ni U \mapsto \llcorner^{U} \in \gimel \cap \underbrace{\urcorner + U}$$

$$\left(\llcorner^{U}\right)_{\mathcal{U}}^{U} \underset{\text{Cauchy net}}{\leadsto}$$

$$\bigwedge_{U}^{\mathcal{U}} \bigvee_{V}^{\mathcal{U}} V + V \subset U \Rightarrow \bigwedge_{W : \acute{W} \subset V}^{\mathcal{U}} \llcorner^{W} - \llcorner^{\acute{W}} = \underbrace{\llcorner^{W} - \urcorner} - \underbrace{\llcorner^{\acute{W}} - \urcorner} \in W - \acute{W} \subset V - V \subset U$$

$$\Rightarrow \llcorner^{U} \leadsto \rightharpoondown \in \gimel \text{ voll } \Rightarrow \rightharpoondown \neq \urcorner \in \daleth\llcorner\gimel \underset{\text{treu}}{\Longrightarrow} \bigvee_{U}^{\mathcal{U}} \rightharpoondown - \urcorner \notin U \Rightarrow \bigvee_{V}^{\mathcal{U}} V + V \subset U \Rightarrow \bigvee_{W}^{\mathcal{U}} \bigwedge_{\acute{W} \subset W}^{\mathcal{U}} \llcorner^{\acute{W}} - \rightharpoondown \in V$$

$$F2 \Rightarrow \bigvee_{\acute{W}}^{\mathcal{U}} \acute{W} \subset W \cap V \Rightarrow \rightharpoondown - \urcorner = \underbrace{\rightharpoondown - \llcorner^{\acute{W}}} + \underbrace{\llcorner^{\acute{W}} - \urcorner} \in V + \acute{W} \subset V + V \subset U\ \lightning$$