

$$\mathbb{R}_+ \xleftarrow[\text{halbnorm}]{p} \mathbb{1} \in \mathop{\mathbb{N}}\nolimits_0 \mathbb{K} \left\{ \begin{array}{l} \overline{\mathbb{1} + \mathbb{1}} \leq \overline{\mathbb{1}} + \overline{\mathbb{1}} \text{ sub-add} \\ \overline{\mathbb{1}_\alpha} = \overline{\mathbb{1}} \overline{\alpha} \text{ hom} \end{array} \right. \Rightarrow p(0) = 0$$

$$\mathcal{P} \supset Q \text{ fin}$$

$$\mathbb{1}_{\leq \varepsilon}^Q = \frac{\mathbb{1} \in \mathbb{1}}{\bigwedge_p^Q \overline{\mathbb{1} - \mathbb{1}} < \varepsilon} = \bigcap_p^Q \mathbb{1}_{\leq \varepsilon}^p: \quad \mathbb{1}_{\leq \varepsilon}^Q = \frac{\mathbb{1} \in \mathbb{1}}{\bigwedge_p^Q \overline{\mathbb{1} - \mathbb{1}} \leq \varepsilon} = \bigcap_p^Q \mathbb{1}_{\leq \varepsilon}^p$$

$$\mathbb{1}_{< \varepsilon}^Q = \frac{\mathbb{1} \in \mathbb{1}}{\bigwedge_p^Q \overline{\mathbb{1}} < \varepsilon} = \bigcap_p^Q \mathbb{1}_{< \varepsilon}^p: \quad \mathbb{1}_{\leq \varepsilon}^Q = \frac{\mathbb{1} \in \mathbb{1}}{\bigwedge_p^Q \overline{\mathbb{1}} \leq \varepsilon} = \bigcap_p^Q \mathbb{1}_{\leq \varepsilon}^p$$

$$\mathbb{1} \in \mathop{\mathbb{N}}\nolimits_0 \mathbb{K} \text{ poly-normed} \Rightarrow \mathbb{1} \in \mathop{\mathbb{N}}\nolimits_0 \mathbb{K}$$

$$\mathcal{U} = \frac{\mathbb{1}_{\leq \varepsilon}^Q}{\mathcal{P} \supset Q \text{ fin} : \varepsilon > 0} \text{ stand 0-Umgbasis von } \mathbb{1}$$

$$\mathbb{1} \text{ metr} \Rightarrow \delta(\mathbb{1}) = \sum_{0 \leq n} 2^{-n} \frac{p_n(\mathbb{1})}{1 + p_n(\mathbb{1})} \Rightarrow \mathbb{1} \wr \mathbb{1} = \delta\left(\mathbb{1} - \mathbb{1}\right) \text{ metric on } \mathbb{1}$$

$$\text{stand 0-Umgbasis } \mathbb{1} \supset U_n = \frac{\mathbb{1} \in \mathbb{1}}{\delta(\mathbb{1}) < 1/n}$$

$$\mathbb{1} \text{ Frech} \Leftrightarrow \text{voll metr}$$