

$\mathbb{1}$  voll

$$\mathbb{K}_0 \triangleleft \mathbb{1} \supset \mathcal{F} \text{ ptw bes } \bigwedge_{\mathbb{1}} \bigvee_{\mathbb{L}}^{\mathcal{F}} \overline{\mathbb{L}} < \infty \xrightarrow{\text{UBP}} \mathcal{F} \text{ glm bes } \bigvee_{\mathbb{L}}^{\mathcal{F}} \overline{\mathbb{L}} < \infty$$

$$\mathfrak{U}_n = \frac{\mathbb{1} \in \mathbb{1}}{\bigwedge_{\mathbb{L}}^{\mathcal{F}} \overline{\mathbb{L}} \leq n} = \bigcap_{\mathbb{L}}^{\mathcal{F}} \frac{\mathbb{1} \in \mathbb{1}}{\overline{\mathbb{L}} \leq n} \subset \mathbb{1} \text{ voll}$$

$$\mathcal{F} \text{ ptw bes } \Rightarrow \mathbb{1} = \frac{\mathbb{1} \in \mathbb{1}}{\bigvee_{\mathbb{L}}^{\mathcal{F}} \overline{\mathbb{L}} < \infty} = \bigcup_n^{\mathbb{N}} \frac{\mathbb{1} \in \mathbb{1}}{\bigvee_{\mathbb{L}}^{\mathcal{F}} \overline{\mathbb{L}} \leq n} = \bigcup_n^{\mathbb{N}} \mathfrak{U}_n \quad \text{Baire} \quad \bigvee_n^{\mathbb{N}} \mathfrak{U}_n \neq \emptyset \Rightarrow \bigvee_{\mathbb{1}} \bigvee_r^{\mathbb{R}} \mathbb{1}_{\leq r}^{\mathbb{1}} \subset \mathfrak{U}_n$$

$$\Rightarrow \mathbb{1}_{\leq r} \subset \mathbb{1}_{\leq r}^{\mathbb{1}} - \mathbb{1}_{\leq r}^{\mathbb{1}} \subset \mathfrak{U}_n - \mathfrak{U}_n \Rightarrow \bigwedge_{\mathbb{L}}^{\mathcal{F}} \overline{\mathbb{L}}_{\leq r} \leq 2n \Rightarrow \overline{\mathbb{L}} \leq 2n/r$$