

$$\begin{array}{ccc}
\mathcal{U}|\mathbb{1} & \cong & \mathbb{1} = mP_m + \int^{d_\perp \lambda} \sigma_\perp \lambda \\
\downarrow & & \\
\mathcal{P}|\mathbb{1} \begin{array}{c} \leftarrow \\ \mathbb{R} \end{array} & \cong & d_\perp \lambda: = \ker \frac{1}{2} \underbrace{[\mathbb{1} - \lambda I + |\mathbb{1} - \lambda I|]} \\
\downarrow & & \\
\mathcal{P}|\mathbb{1} \begin{array}{c} \leftarrow \\ \mathbb{R} \end{array} & \cong & P_\lambda \\
\downarrow & & \\
\mathcal{U}|\mathbb{1} & \cong & \int^{dP_\lambda} \mathbb{R} \lambda = \int_{dP}^{\mathbb{R}} id
\end{array}$$

$$\mathcal{P}|\mathbb{1} \begin{array}{c} \leftarrow \\ \mathbb{R} \end{array} =$$

$$\lambda \in \mathbb{R} \xrightarrow{P} \mathcal{P}|\mathbb{1} \ni P_\lambda = \overset{*}{P}_\lambda = \overset{?}{P}_\lambda$$

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$\lambda \leq \mu \Rightarrow P_\lambda \leq P_\mu$  isoton :  $\lambda \nearrow \mu \Rightarrow P_\mu \overset{s}{\rightsquigarrow} P_\lambda$  st rechts-stet :  $\lambda \rightsquigarrow +\infty \Rightarrow P_\lambda \overset{s}{\rightsquigarrow} I$ :  $\lambda \rightsquigarrow -\infty \Rightarrow P_\lambda \overset{s}{\rightsquigarrow} 0$ :

$$P_\lambda \leq P_\mu : P_\lambda P_\mu = P_\lambda = P_\mu P_\lambda$$

$$\begin{cases} P_\mu \overset{s}{\rightsquigarrow} P_\lambda \\ P_\lambda \overset{s}{\rightsquigarrow} I \\ P_\lambda \overset{s}{\rightsquigarrow} 0 \end{cases} : \bigwedge_{\mathbb{1} \in \mathbb{1}} \begin{cases} P_\mu \mathbb{1} \overset{s}{\rightsquigarrow} P_\lambda \mathbb{1} \\ P_\lambda \mathbb{1} \overset{s}{\rightsquigarrow} \mathbb{1} \\ P_\lambda \mathbb{1} \overset{s}{\rightsquigarrow} 0 \end{cases}$$

$$\bigwedge_{\Gamma \in \mathbb{1}} \Gamma \overline{P_\mu - P_\lambda} \underset{\mu}{\rightsquigarrow} 0 \Rightarrow P_\mu \underset{s}{\rightsquigarrow} P_\lambda$$

$$\overline{P_\mu - P_\lambda}^2 = \overline{P_\mu - P_\lambda} \overline{P_\mu - P_\lambda} = \overline{P_\mu - P_\lambda} \underset{\mu \rightsquigarrow \lambda}{\rightsquigarrow} 0$$

$$\mathcal{P}|_{\mathbb{1}} \underset{0}{\overset{\infty}{\rightsquigarrow}} \mathbb{R} \quad \ni \quad P_\lambda$$



$$\tilde{\mathcal{U}}|_{\mathbb{1}} \quad \ni \quad \int_{dP_\lambda}^{\mathbb{R}} \lambda = \int_{dP}^{\mathbb{R}} id$$

$$\mathcal{P}|_{\mathbb{1}} \underset{0}{\overset{\infty}{\rightsquigarrow}} \mathbb{R} = \left\{ \begin{array}{l} \lambda \in \mathbb{R} \xrightarrow{P} \mathcal{P}|_{\mathbb{1}} \ni P_\lambda = \overset{*}{P}_\lambda = \overset{2}{P}_\lambda \\ \lambda \leq \mu \Rightarrow P_\lambda \leq P_\mu: P_\lambda P_\mu = P_\lambda = P_\mu P_\lambda \text{ isoton} \\ \lambda \nearrow \mu \Rightarrow P_\mu \underset{s}{\rightsquigarrow} P_\lambda: \bigwedge_{\Gamma \in \mathbb{1}} P_\mu \Gamma \underset{\parallel}{\rightsquigarrow} P_\lambda \Gamma \text{ stark rechts-stet} \\ \lambda \geq M \Rightarrow P_\lambda = I \lambda < m \Rightarrow P_\lambda = 0 \end{array} \right\}$$