$\boxed{Z20}$ $d = \dim \mathcal{H} < \infty$

$$\mathcal{H} \otimes \mathcal{H}^* \ni A = \sum_{i=1}^{d} \sqrt{s_i}\, |\alpha_i\rangle \otimes \langle \beta_i | \qquad s_i \geq 0$$

$$\langle \alpha_i | \alpha_j \rangle = \delta_{ij}$$

$$\langle \beta_i | \beta_j \rangle = \delta_{ij}$$

$d_i = \dim \mathcal{H}_i < \infty$

$$\mathcal{H}_1 \otimes \mathcal{H}_2 \ni |\psi\rangle = \sum_{i=1}^{d_{min}} \sqrt{\eta_i}\, |\alpha_i\rangle \otimes |\beta_i\rangle \qquad \eta_i \geq 0$$

$$1 =: \|\psi\|^2 = \sum_{i=1}^{d_{min}} \eta_i$$

$|\psi\rangle\langle\psi|$ ÖNADA. $\in \mathrm{Lin}\, \mathcal{H}_1$

$$(\mathbb{I} \otimes \mathrm{Tr})(|\psi\rangle\langle\psi|) = \varrho_1 \equiv \sum_{i=1}^{d_{min}} \eta_i\, |\alpha_i\rangle\langle\alpha_i|$$

$$(\mathrm{Tr} \otimes \mathbb{I})(\underbrace{|\psi\rangle\langle\psi|}) = \varrho_2 = \sum_{j=1}^{d_{min}} \eta_j\, |\beta_j\rangle \otimes \langle \beta_j|$$

$$\left(\sum_i \cancel{\eta_i\, |\alpha_i\rangle} \sqrt{\eta_j}\, |\alpha_i\rangle \underbrace{\langle \alpha_j|} \otimes |\beta_i\rangle \otimes \langle \beta_j|\right)$$

$\#$ $|\psi\rangle = |\alpha_1\rangle \otimes |\beta_1\rangle$

$$|\psi\rangle = \frac{1}{\sqrt{2}}\left(|\alpha_1\rangle \otimes |\beta_1\rangle + |\alpha_2\rangle \otimes |\beta_2\rangle\right)$$

$$|\psi\rangle = \frac{1}{2}\left(|\alpha_1\rangle \otimes |\beta_1\rangle + |\alpha_2\rangle \otimes |\beta_2\rangle + |\alpha_1\rangle \otimes |\beta_2\rangle + |\alpha_2\rangle \otimes |\beta_1\rangle\right)$$

$$= \frac{1}{\sqrt{2}}\left(|\alpha_1\rangle + |\alpha_2\rangle\right) \otimes \frac{1}{\sqrt{2}}\left(|\beta_1\rangle + |\beta_2\rangle\right)$$

$$\phi \mapsto U_L \phi := e^{i h_L} \phi \circ L^{-1}$$

$$h_L(x) := \left(-\frac{m}{2}|Lu - u|^2 \tau + m(Lu - u)\cdot \Pi_u\left(x - \frac{Lo-o}{2}\right)\right)$$

L (m,k) <u>SZIMM.-JA</u>, HA $\exists\, g_L : M \to \mathbb{R}$:

$\forall \phi \in \mathcal{F}_u^{m,k}$-RE $U_L \phi \in \mathcal{F}_u^{m,\underbrace{k+Dg_L}_{k'}}$

ILYENKOR $D \wedge k = D \wedge k'$

$$U_L\big|_{\mathcal{F}_u^{m,k}} \text{ UNITÉR}$$

$$U_{L'} U_L = \omega(L',L)\cdot U_{L'L}$$

$$|\quad| = 1$$

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$$\left(D_u - i\left(H_{u1} + H_{u2} + K_{12}\right)\right)\phi \quad \lambda_{H \times \overline{H}} = 0$$

$$\left(D_u - i\left(\frac{\Delta_1}{2m_1} + \frac{\Delta_2}{2m_2}\right)\right)(\phi_1 \; \phi_2) = 0$$

$$\chi_N \wedge |\varphi\rangle\langle\varphi|$$

$$\chi_N |\varphi\rangle\langle\varphi| \neq 0$$