ψ
$\mathcal{H}$
A
$\mathcal{H}$
a_n
A
a_n
A
a_n
ψ
n
$n =$
$|n|\psi|^2$
$Born$
$Rule$
$x =$
$|\psi(x)|^2$
x
ψ
ψ
n
$\psi' =$
$\frac{P_n\psi}{\sqrt{\psi P_n \psi}}$
$P_n =$
$n n$
n
ψ
n
ψ
n
n
$state$
$col-$
$lapse$
$wave-$
$func-$
$tion$
$col-$
$lapse$
Z
X
ψ
$+_x$
$-_x$
$+$
$+_x =$
$|_x+|+|^2 =$
$\frac{1}{2}$
$\mathcal{P}_{-_x} =$
$|_x-|+|^2 =$
$\frac{1}{2}$
$\psi_{top} =$
$P^x{}_+ + =$
$+_x x + +$
$\mathcal{P}_{-_x} =$
$|_x-|+|^2 =$
$\frac{1}{2}$
$\tilde{D}_z =$
$\{D_{+_z}, D_{-_z}\}$
${}_zD_+|D_{+_z} =$
1
${}_zD_+|D_{-_z} =$
0
$\mathcal{H}_{Dx}$
$\mathcal{H}_D$
${}_zD_n|D_{m_x} =$
0
$\forall D_{nz} \in$
$\mathcal{H}_{Dz}$
$\forall D_{mx} \in$
$\mathcal{H}_{Dx}$
$\psi =$
$(\sum_n P_n\psi)\otimes$
$(\sum_m P_m D) \mapsto$
$\sum_n P_n\psi\otimes$
D_n
P_n
n^{th}
P_m
m^{th}
ψ
ψ
$_n =$
$Tr(P_n^D.$
$V\psi\psi V^\dagger)$
Z