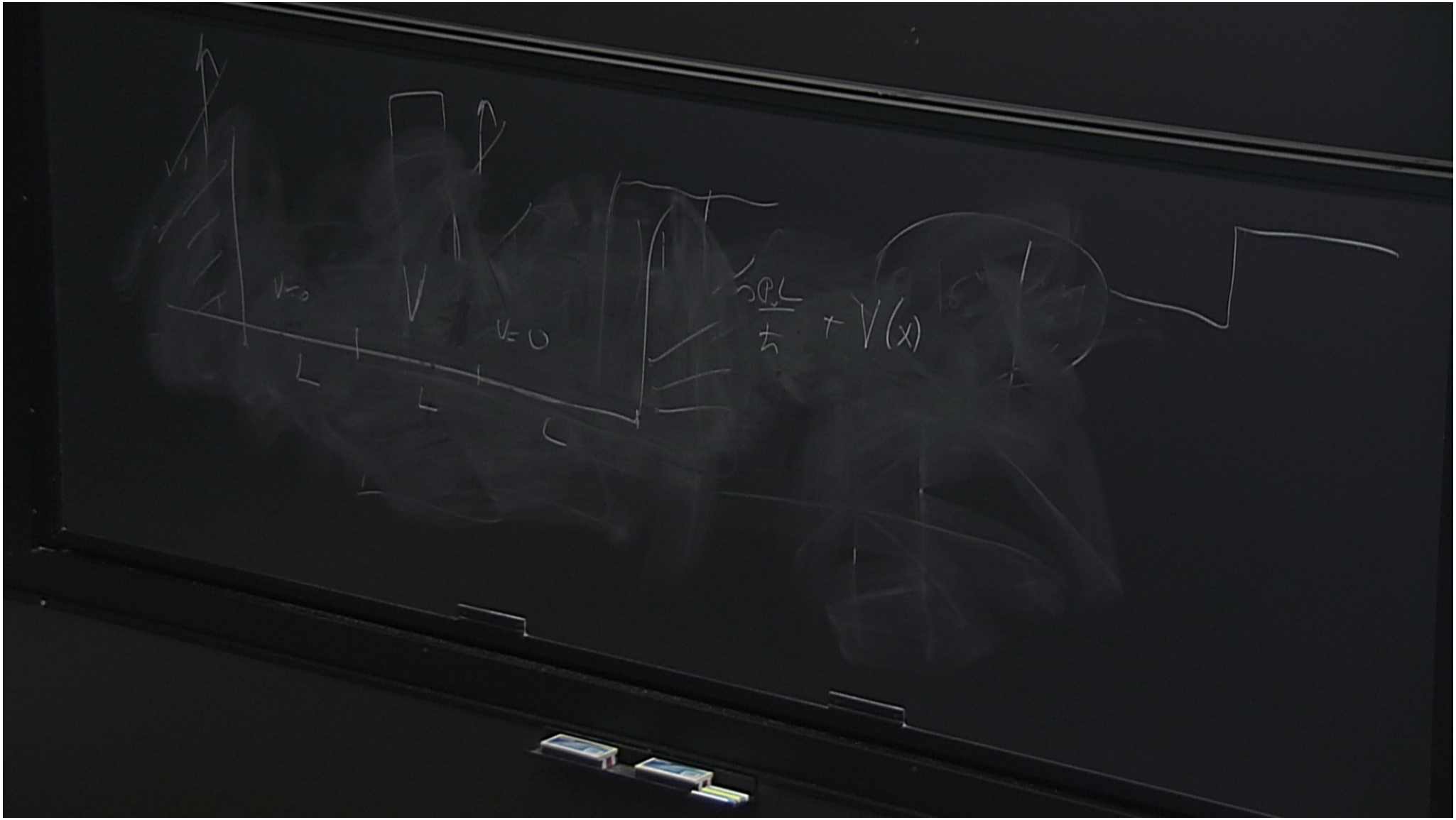
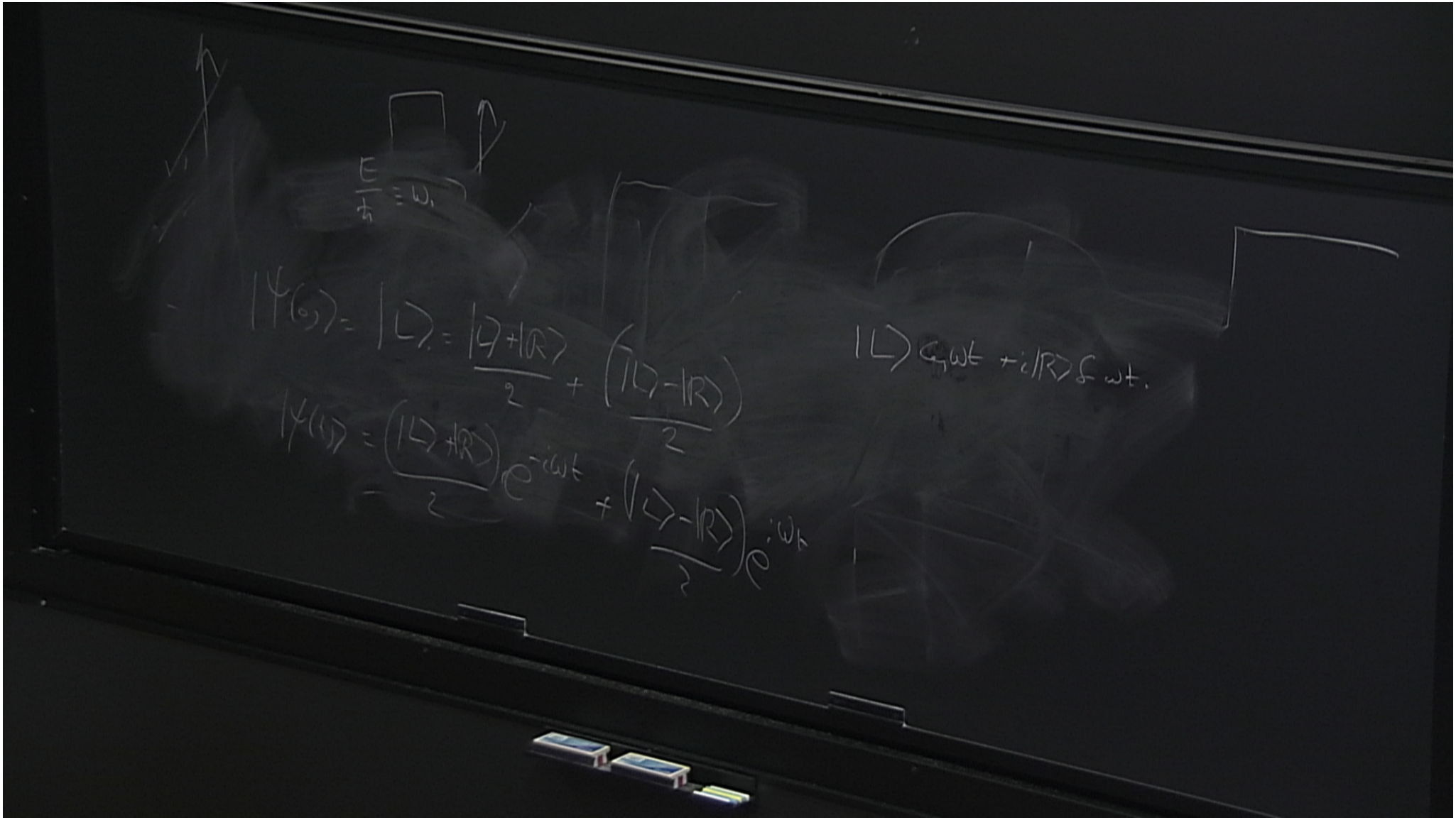
Title: TBA

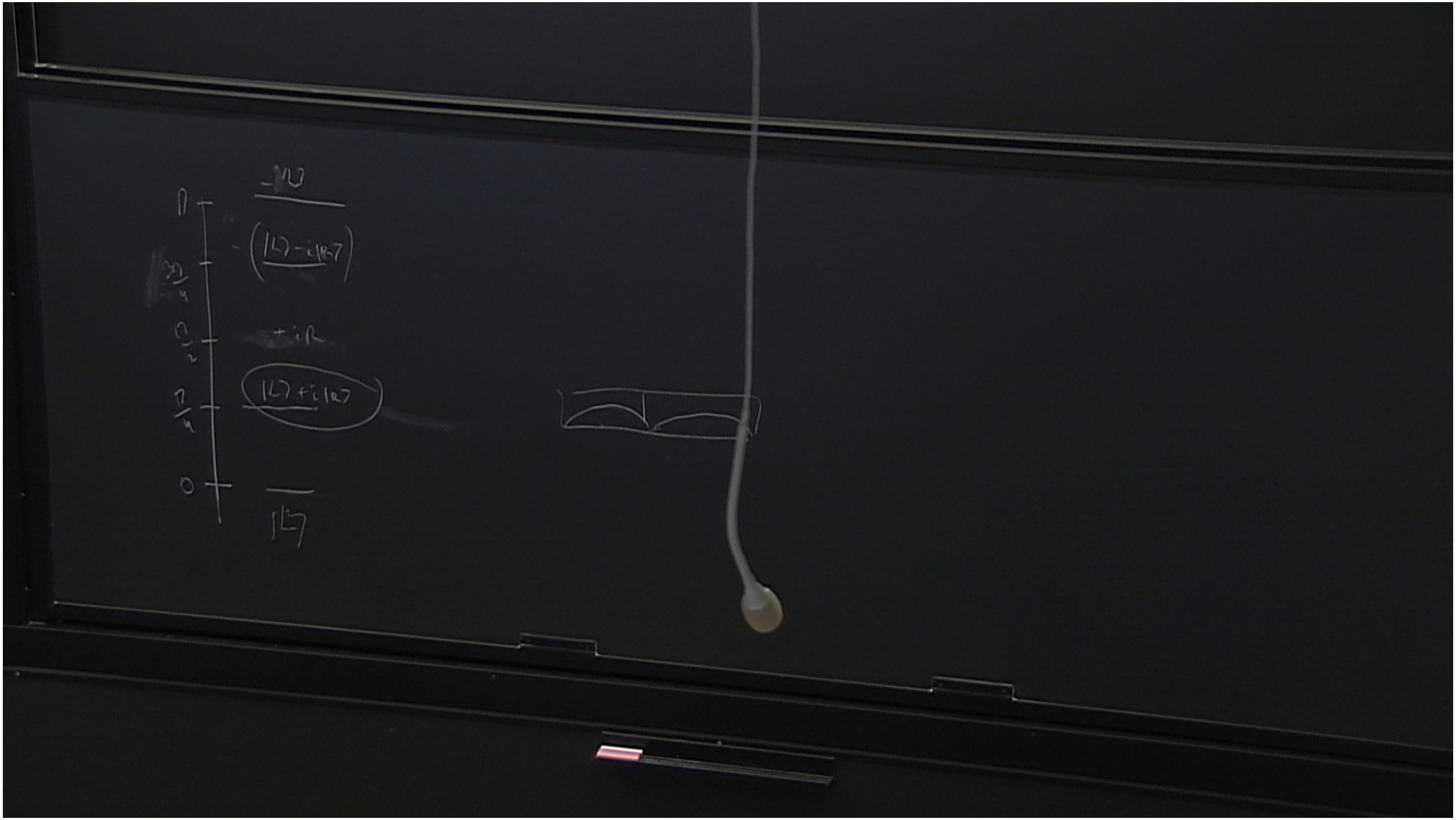
Date: Jun 08, 2016 10:00 AM

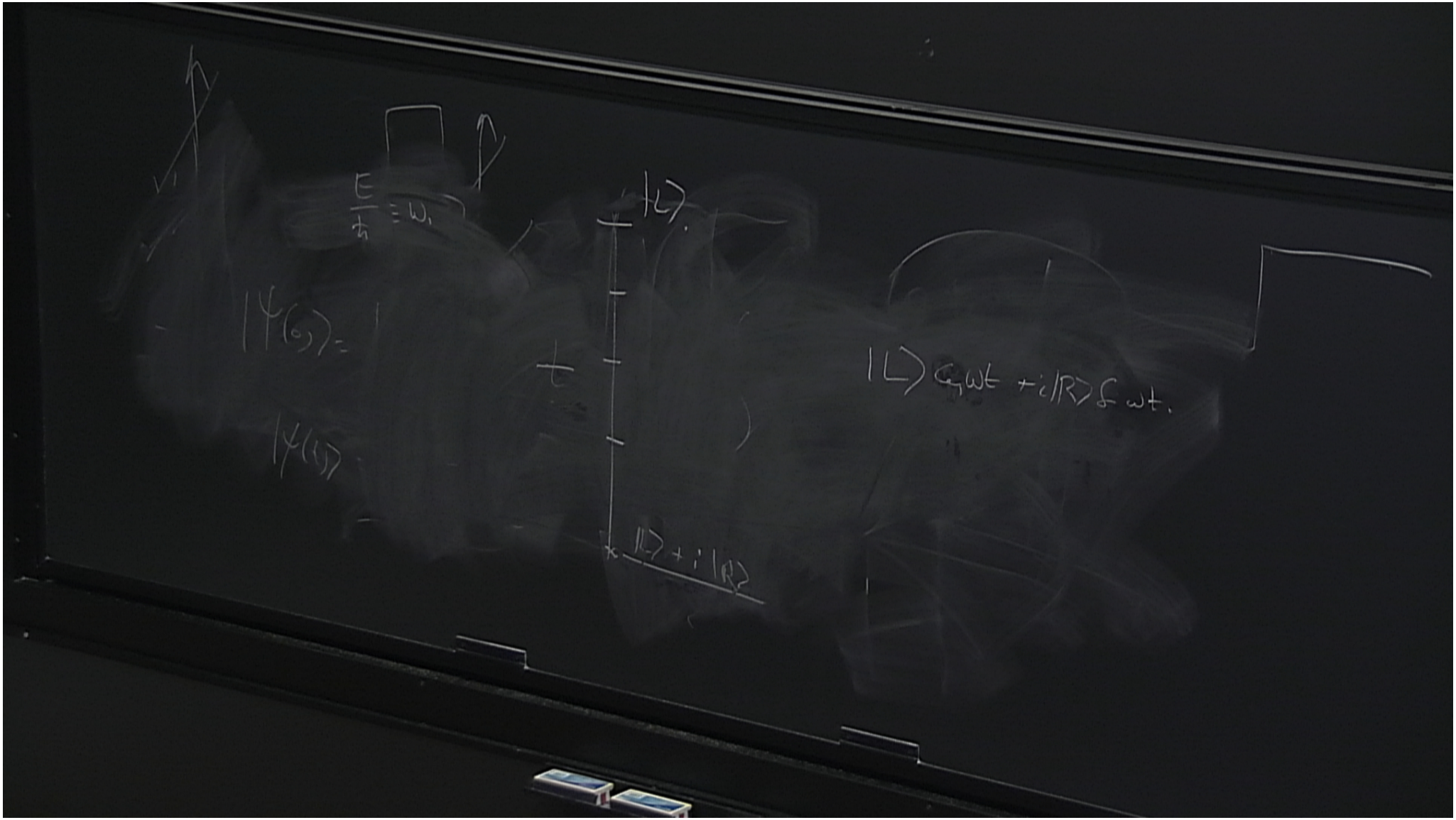
URL: http://pirsa.org/16060081

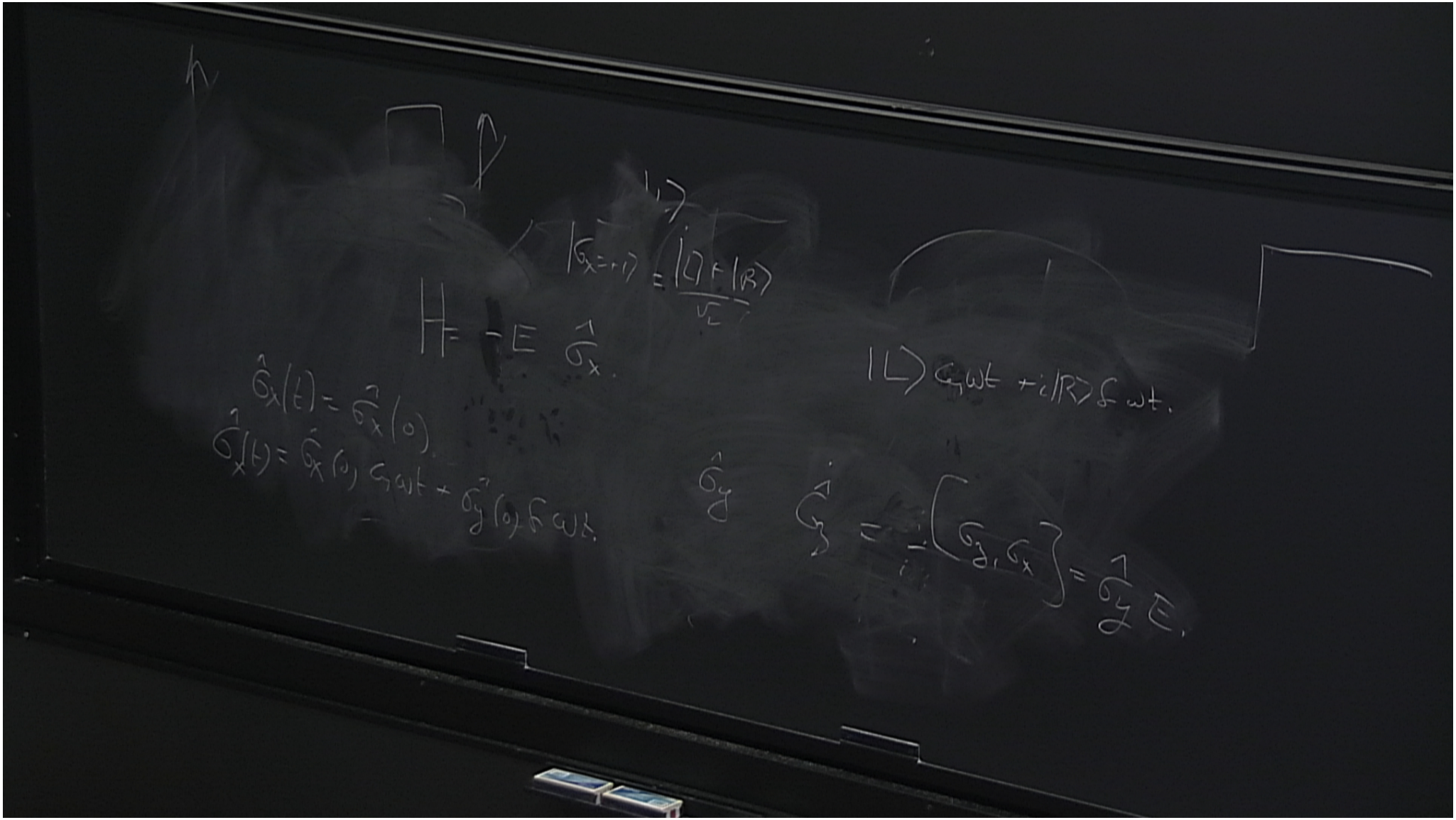
Abstract:

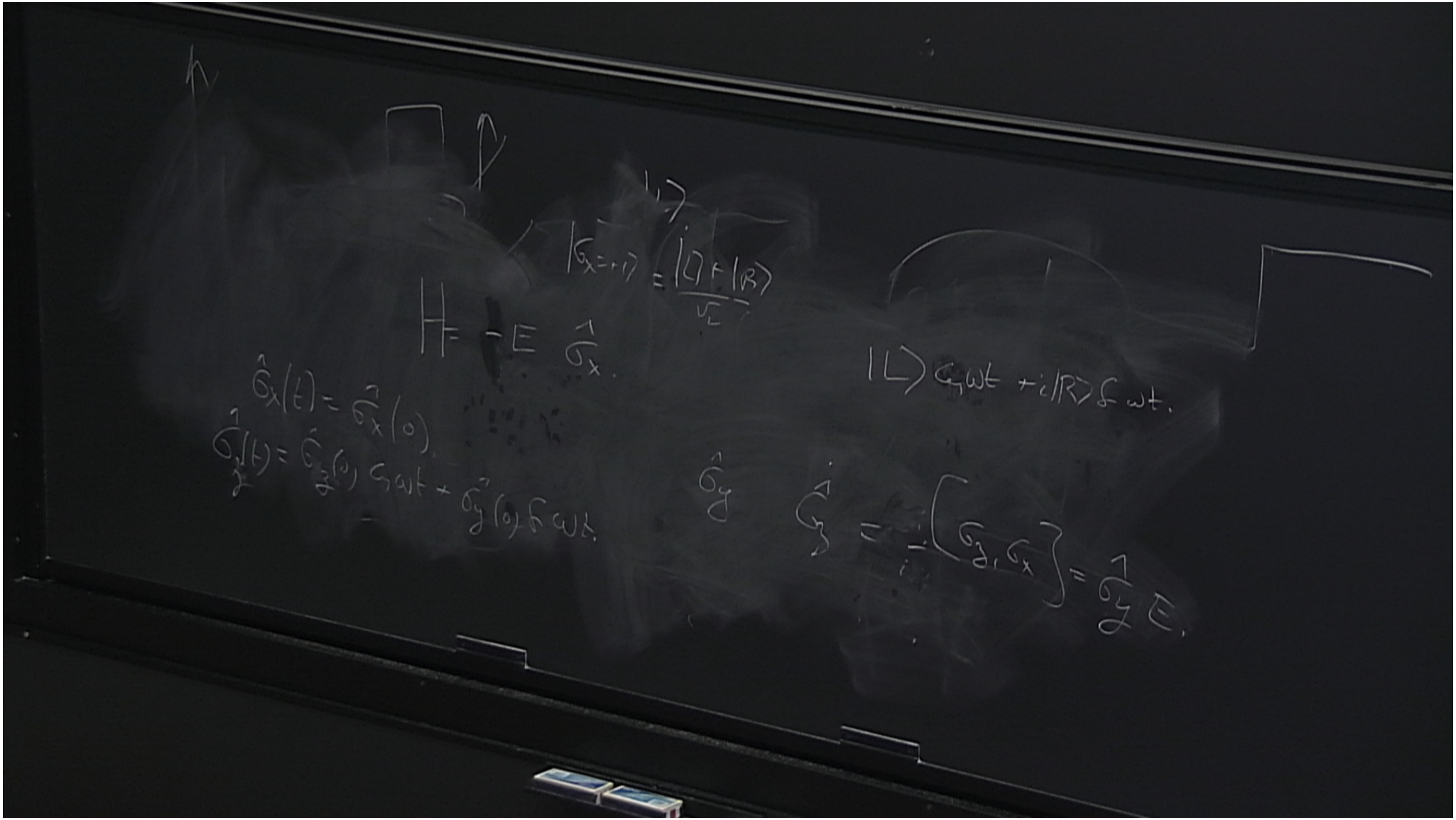

V=0
V
V=0
L
L
L
L
+V(x)

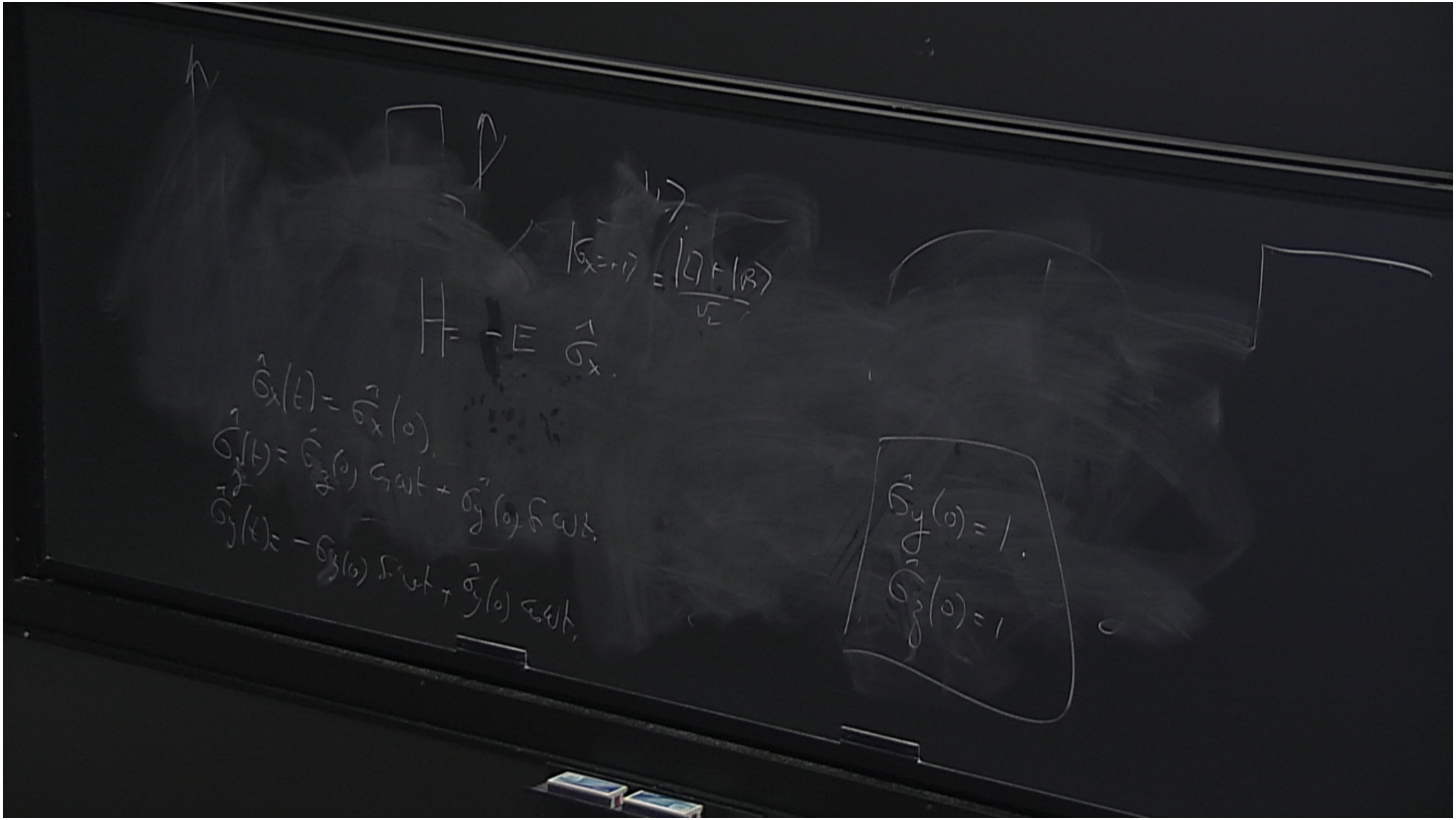

$\frac{E}{\hbar} = \omega_1$
$|\psi(0)\rangle = |L\rangle = \frac{|+\rangle + |-\rangle}{2} + \frac{(|+\rangle - |-\rangle)}{2}$
$|\psi(t)\rangle = \frac{(|+\rangle + |-\rangle)}{2} e^{-i\omega t} + \frac{(|+\rangle - |-\rangle)}{2} e^{i\omega t}$
$|L\rangle \cos\omega t + i|R\rangle \sin\omega t.$

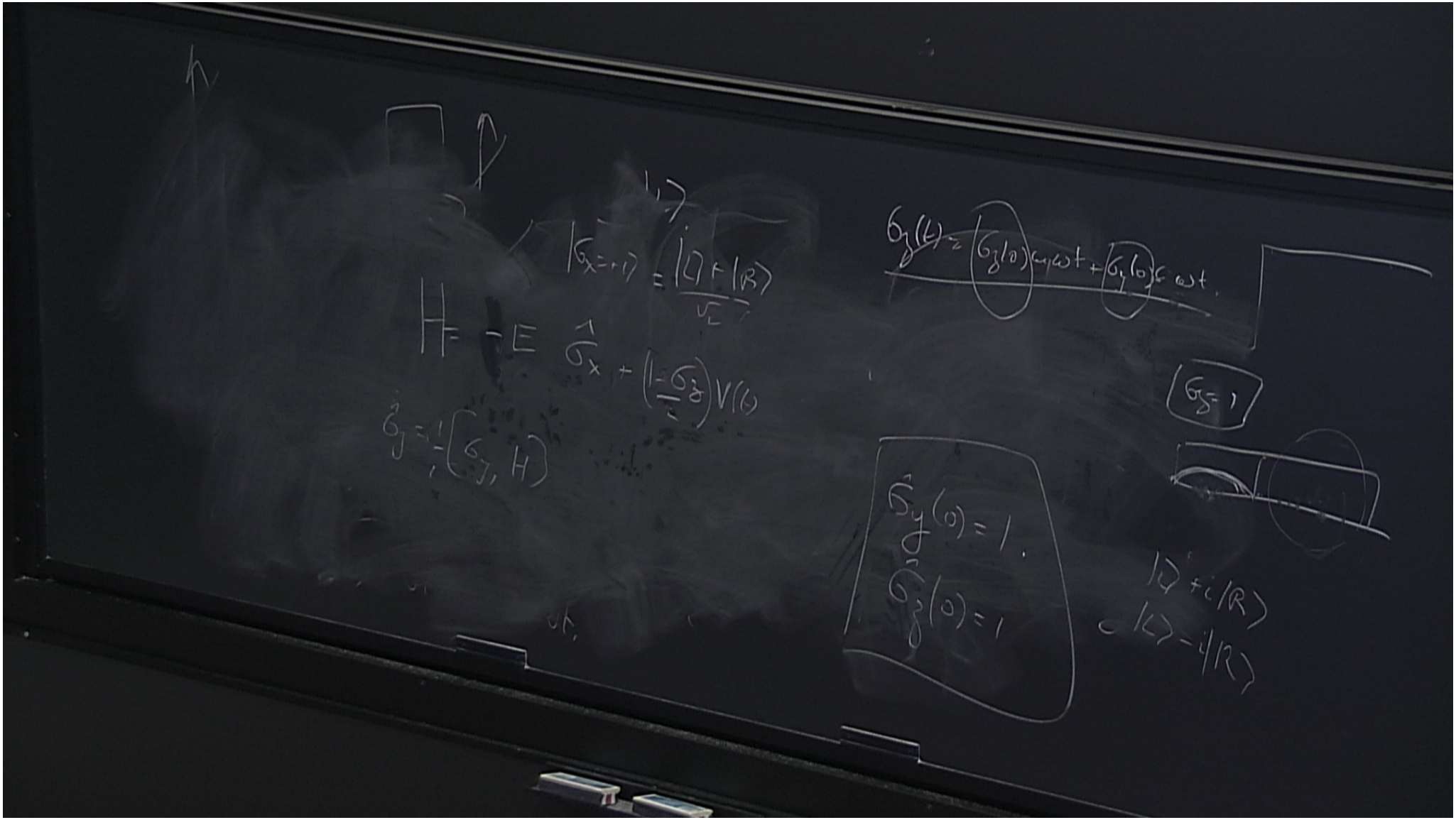


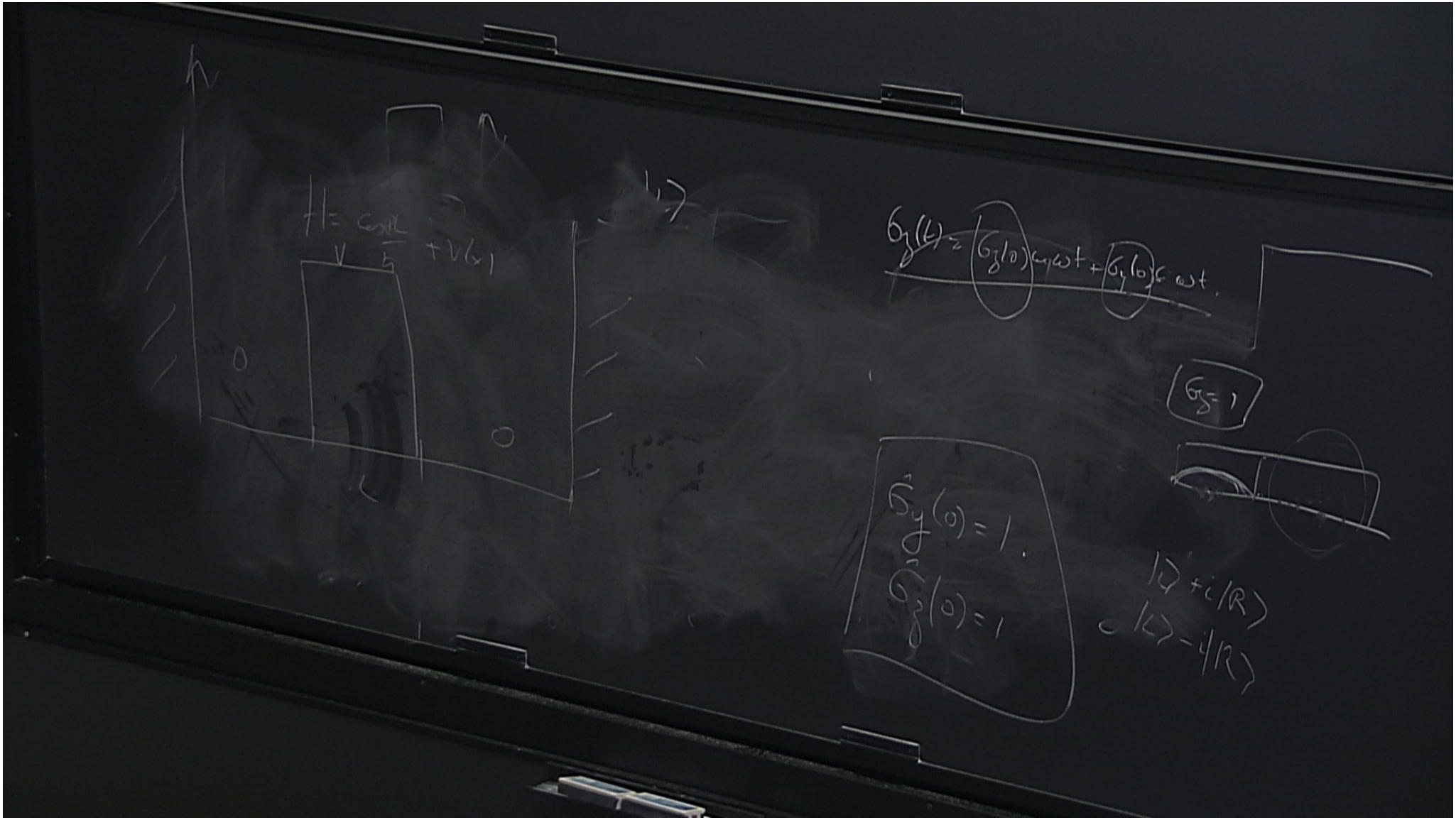

|L⟩
|L⟩ e^{iωt} + e^{i|R⟩}e^{ωt}
|L⟩ + i|R⟩

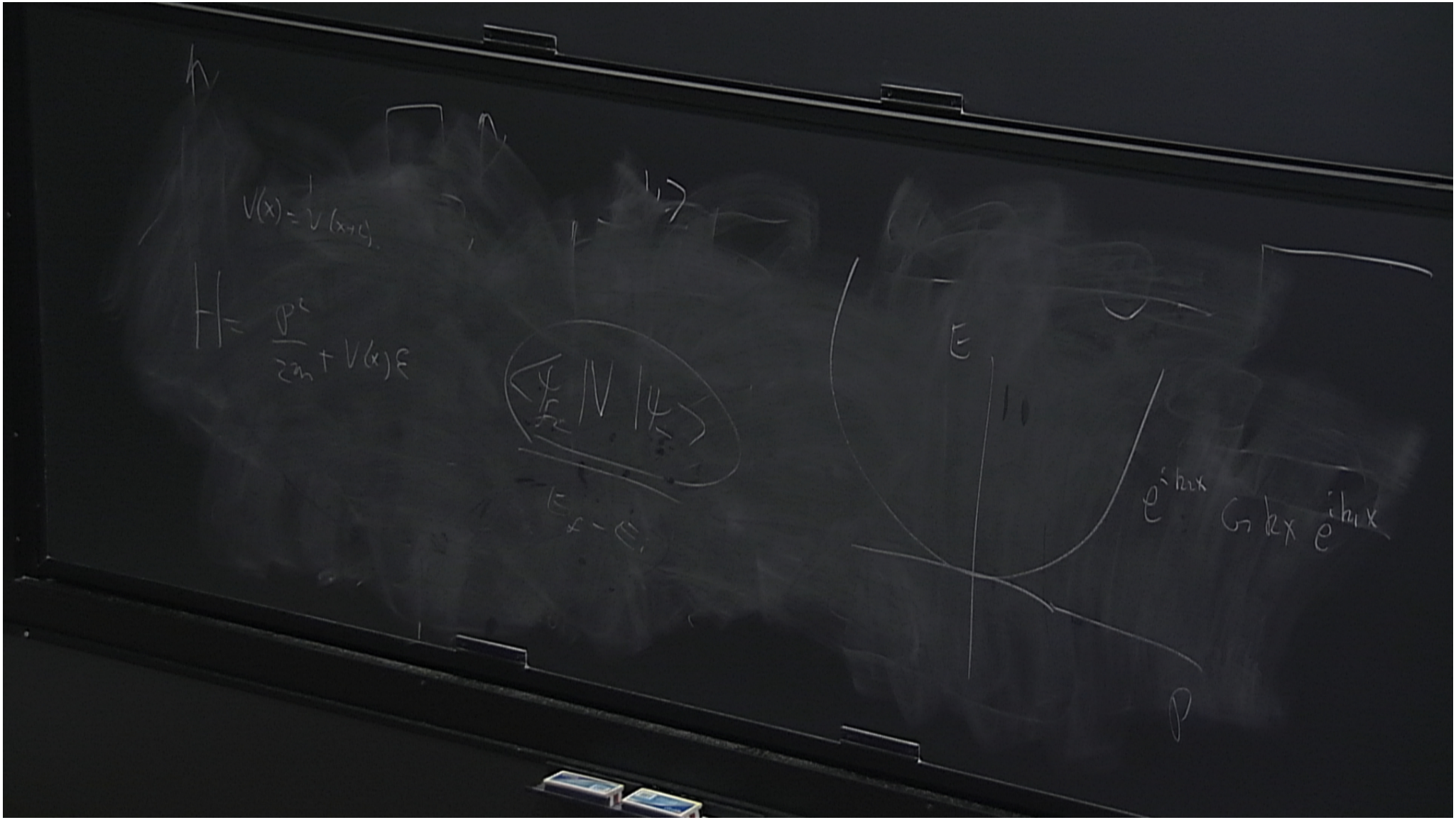

$|\sigma_x=+1\rangle = \frac{|0\rangle + |1\rangle}{\sqrt{2}}$
$H = -E\,\hat{\sigma}_x$
$\hat{\sigma}_x(t) = \hat{\sigma}_x(0)$
$\hat{\sigma}_y(t) = \hat{\sigma}_x(0)\cos\omega t + \hat{\sigma}_y(0)\sin\omega t$
$|L\rangle \cos\omega t + i|R\rangle \sin\omega t$
$\hat{\sigma}_y \quad \dot{\hat{\sigma}}_y = -\frac{i}{\hbar}[\sigma_y, \sigma_x] = \hat{\sigma}_z E$

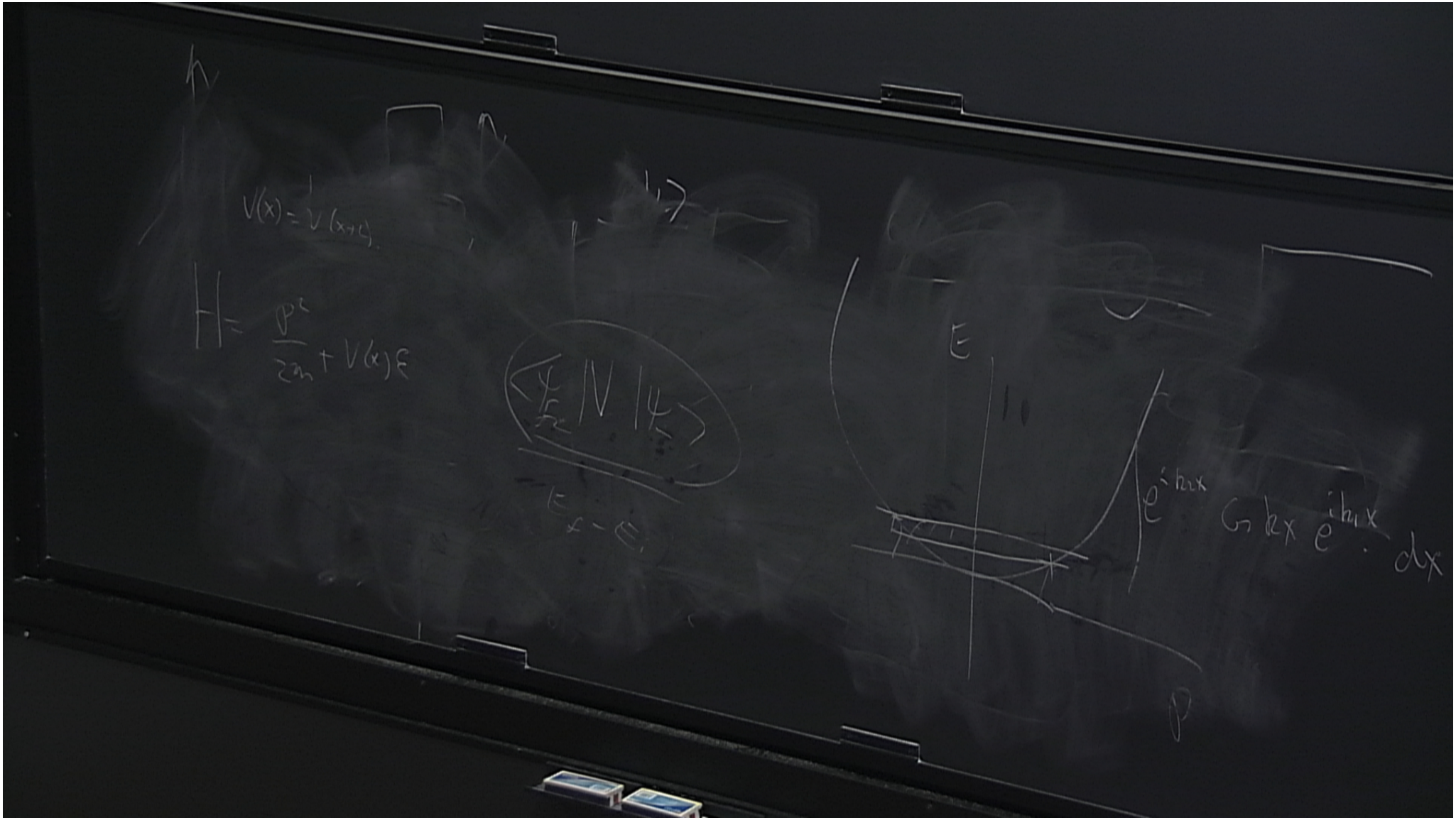

$|\sigma_x=+1\rangle = \frac{|\uparrow\rangle + |\downarrow\rangle}{\sqrt{2}}$
$H = -E\,\hat{\sigma}_x$
$\hat{\sigma}_x(t) = \hat{\sigma}_x(0)$
$\hat{\sigma}_y(t) = \hat{\sigma}_y(0)\cos\omega t + \hat{\sigma}_z(0)\sin\omega t$
$|\downarrow\rangle \cos\omega t + i|\uparrow\rangle \sin\omega t$
$\hat{\sigma}_y \quad \dot{\hat{\sigma}}_y = -\frac{i}{\hbar}[\sigma_y, \sigma_x] = \hat{\sigma}_z E$


$|\sigma_x=+1\rangle = \frac{|\uparrow\rangle + |\downarrow\rangle}{\sqrt{2}}$
$H = -E\,\hat{\sigma}_x$
$\hat{\sigma}_x(t) = \hat{\sigma}_x(0)$
$\hat{\sigma}_y(t) = \hat{\sigma}_y(0)\cos\omega t + \hat{\sigma}_z(0)\sin\omega t$
$\hat{\sigma}_z(t) = -\hat{\sigma}_y(0)\sin\omega t + \hat{\sigma}_z(0)\cos\omega t$
$\hat{\sigma}_y(0) = 1$
$\hat{\sigma}_z(0) = 1$


$|\sigma_x = +1\rangle = \frac{|0\rangle + |1\rangle}{\sqrt{2}}$
$H = -E \hat{\sigma}_x + \left(1 - \frac{\sigma_z}{2}\right) V(t)$
$\dot{\sigma}_j = \frac{1}{i}[\sigma_j, H]$
$\sigma_y(0) = 1$
$\sigma_z(0) = 1$
$|0\rangle + |1\rangle$
$|0\rangle - |1\rangle$
$\sigma_z = 1$


$\sigma_y(t) = (\sigma_y(0)\cos\omega t + \sigma_y(0)\sin\omega t$
$\sigma_y(0) = 1$
$\sigma_y(0) = 1$
$\sigma_y = 1$


V(x) = V(x+a)
H = p²/2m + V(x)
E
p


V(x) = V(x+a)
H = p²/2m + V(x)
E
k
p