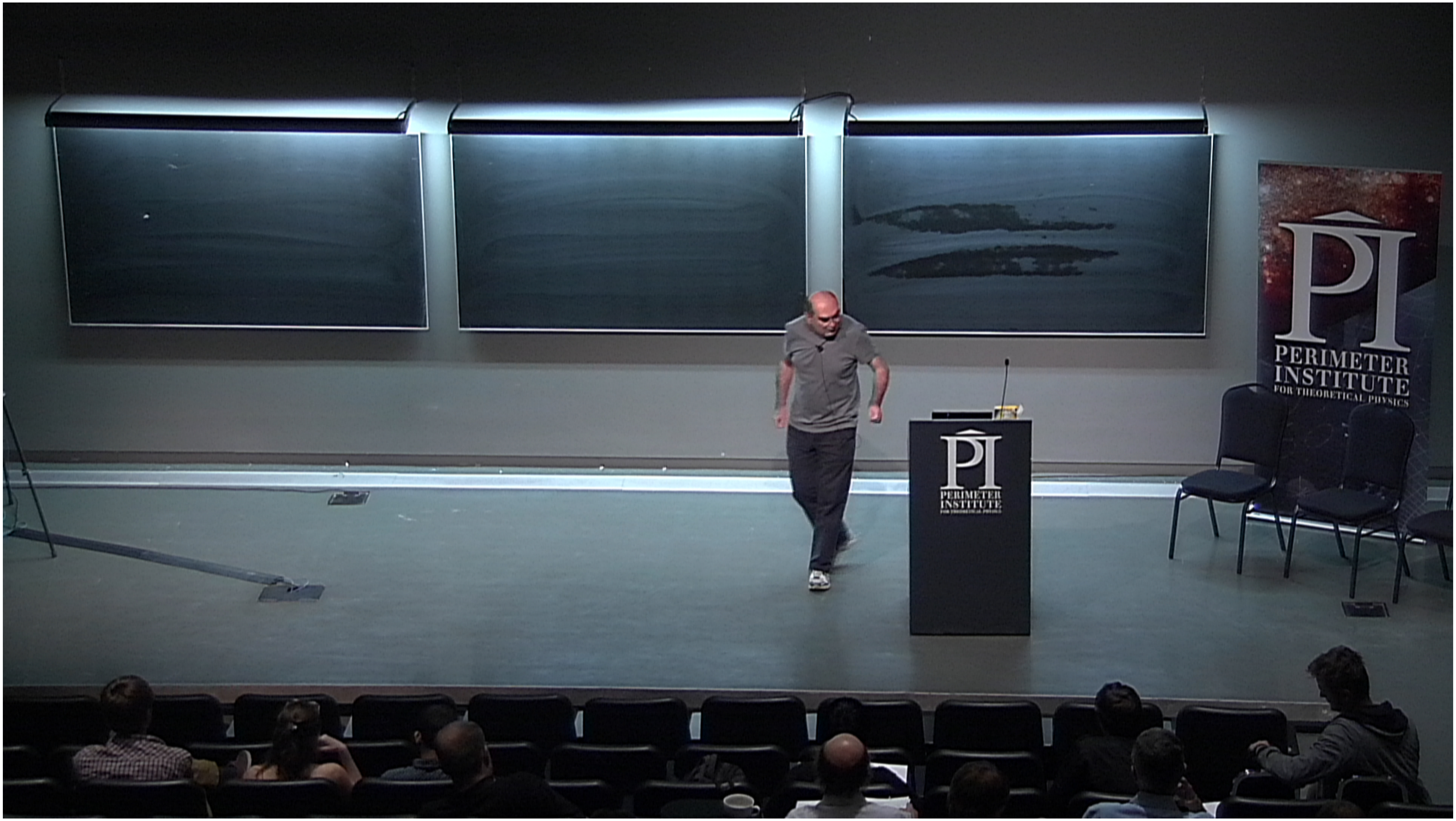
Title: TBA

Date: Jun 27, 2012 04:00 PM

URL: http://pirsa.org/12060071

Abstract: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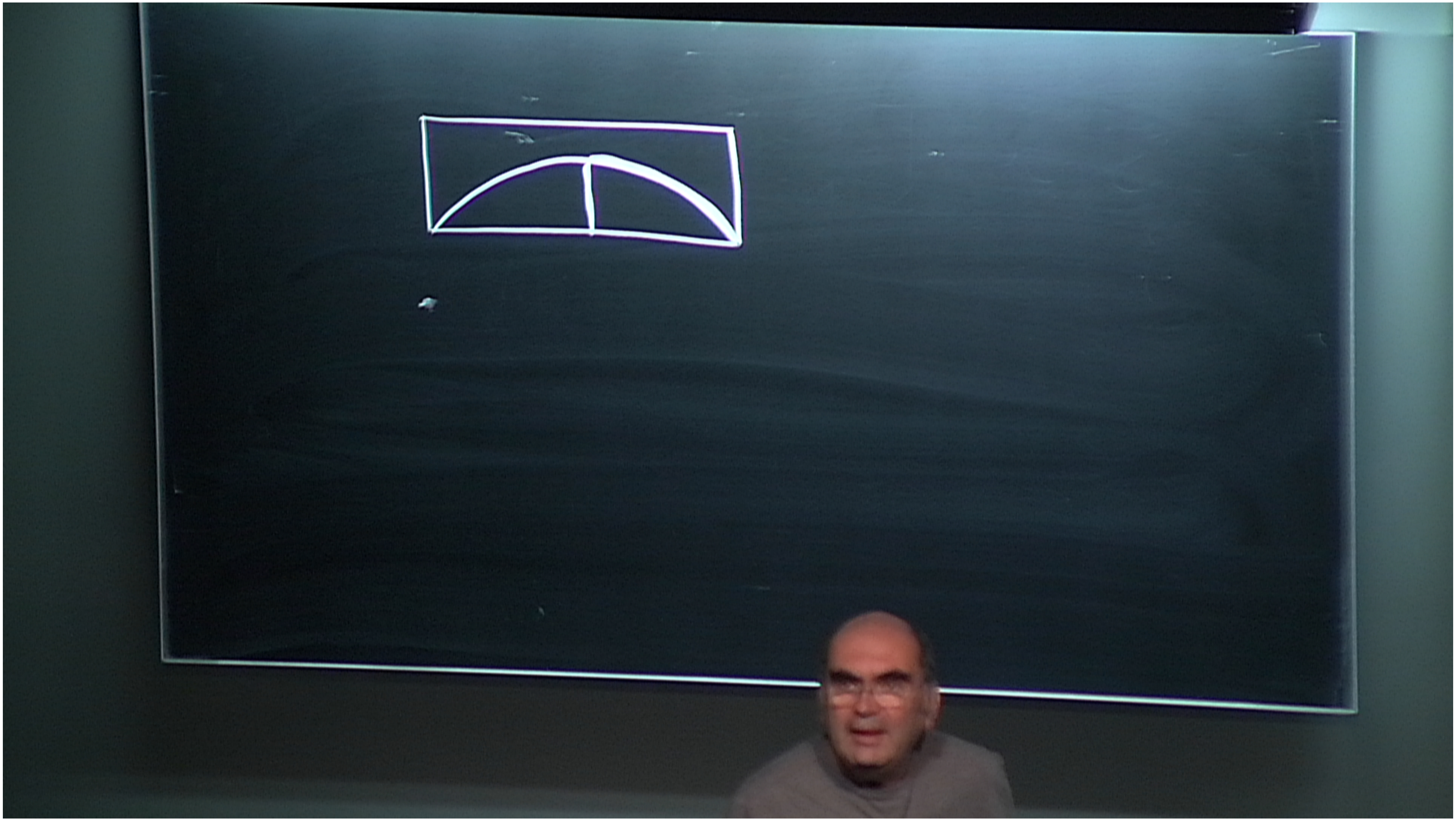
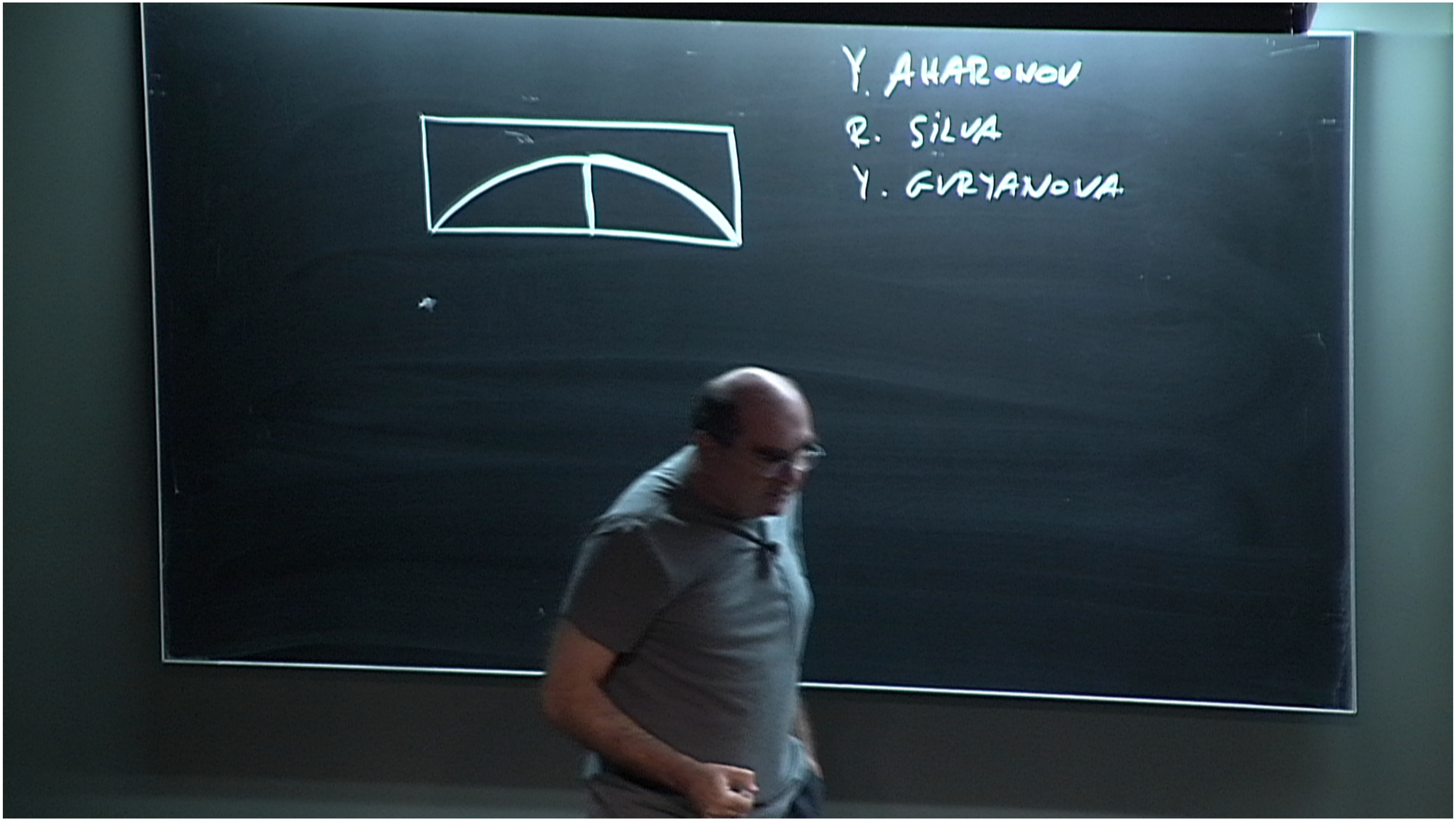
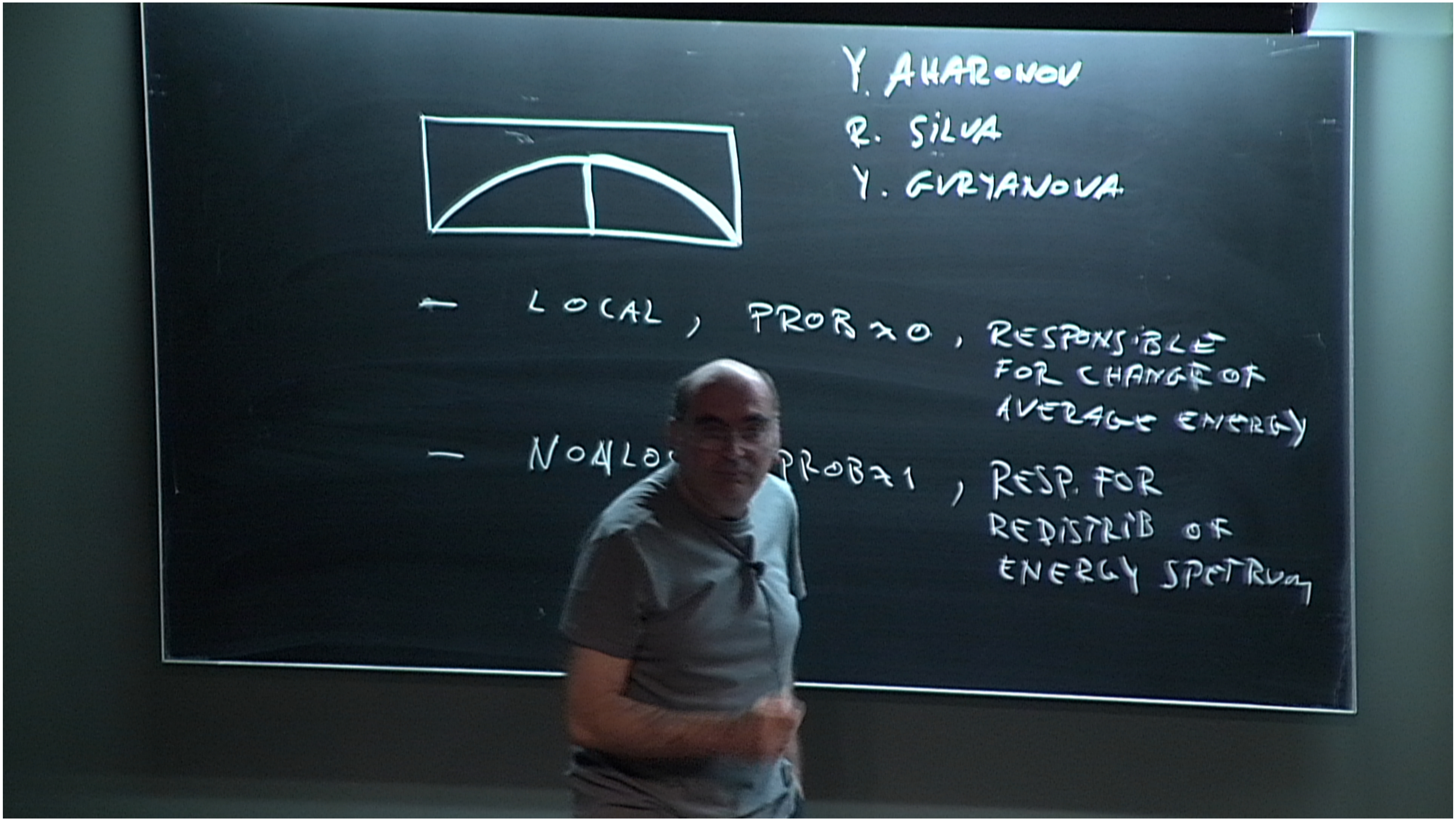
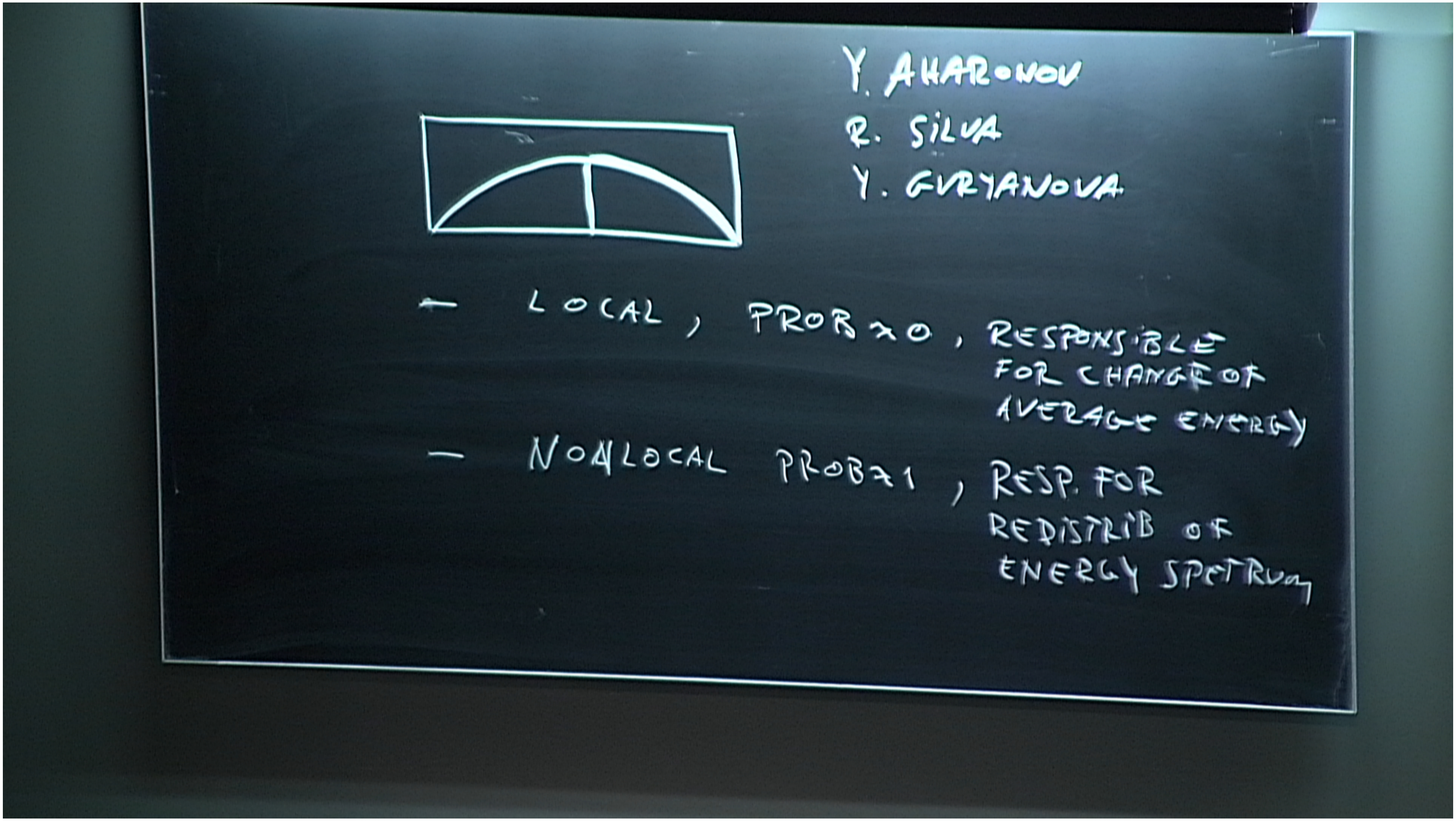
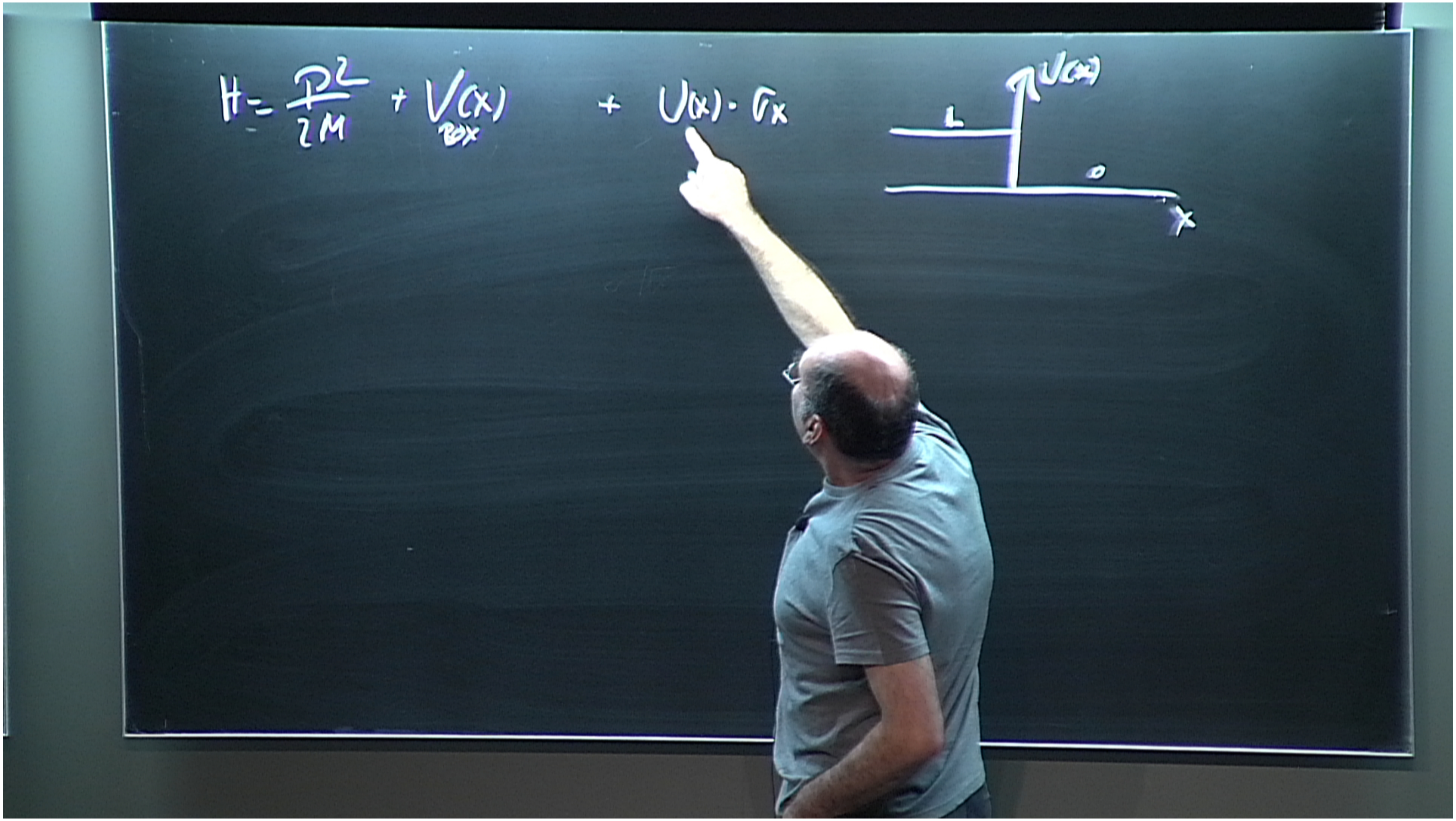
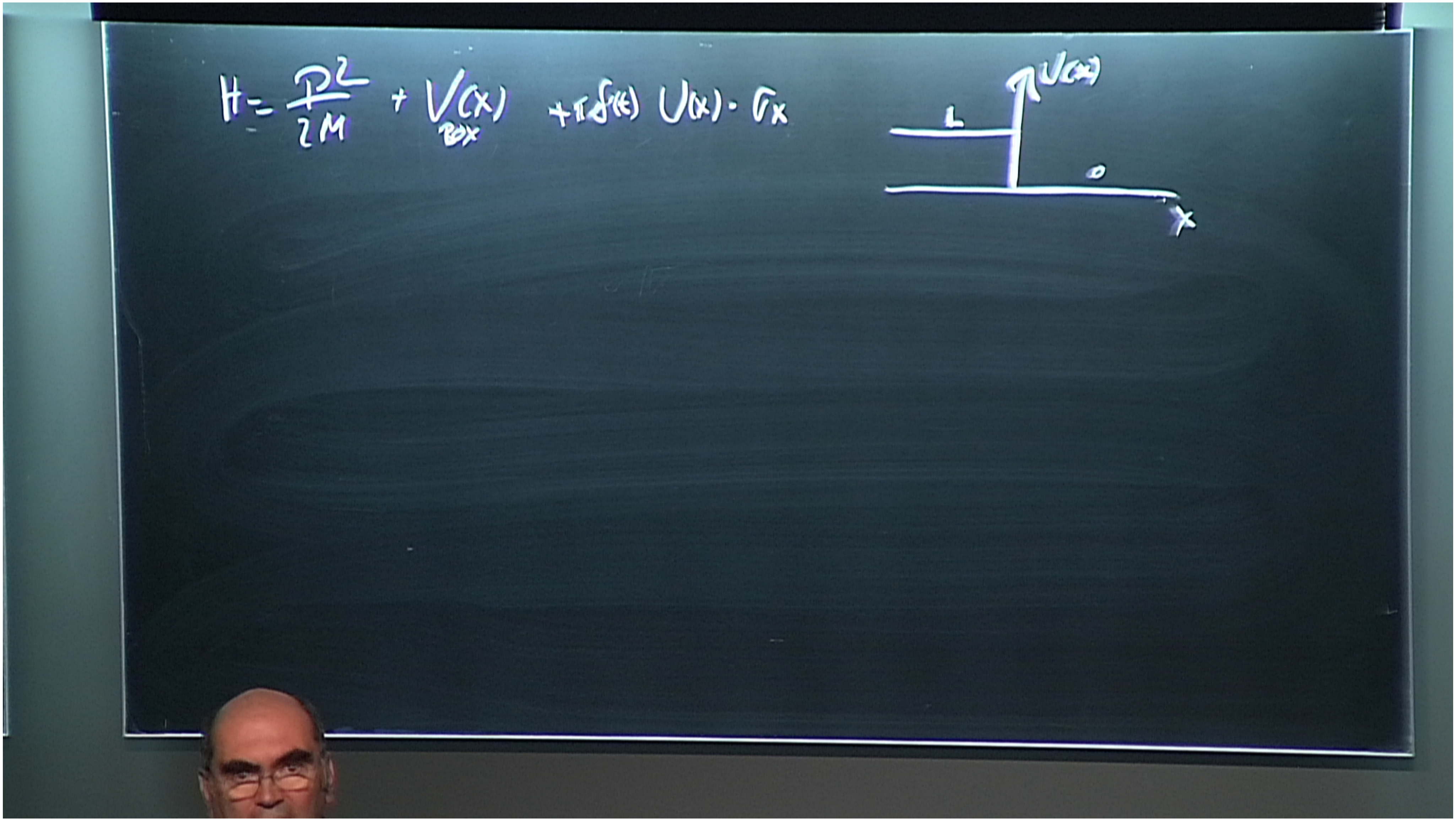


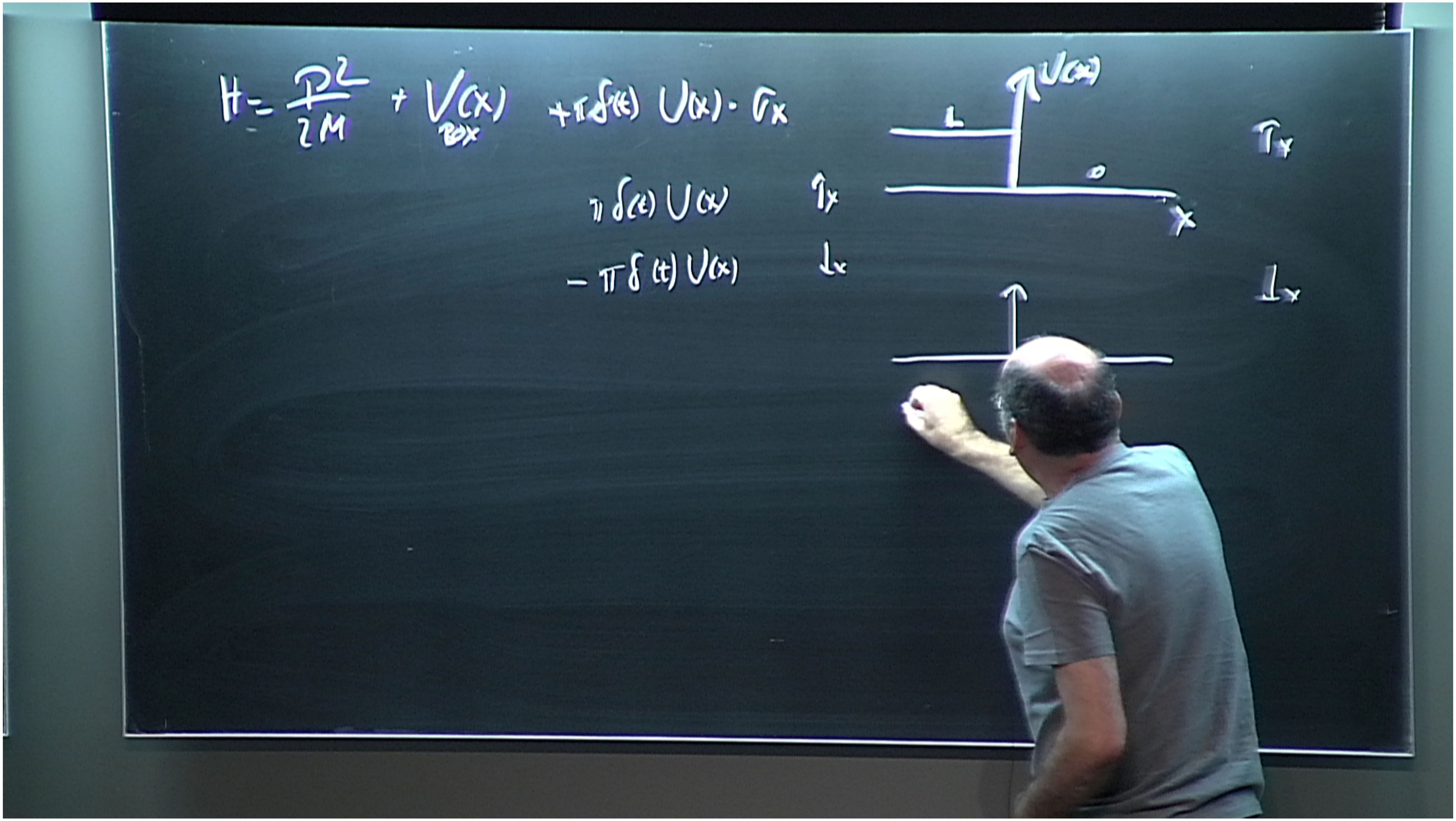

Y. AHARONOV
R. SILVA
Y. GURYANOVA

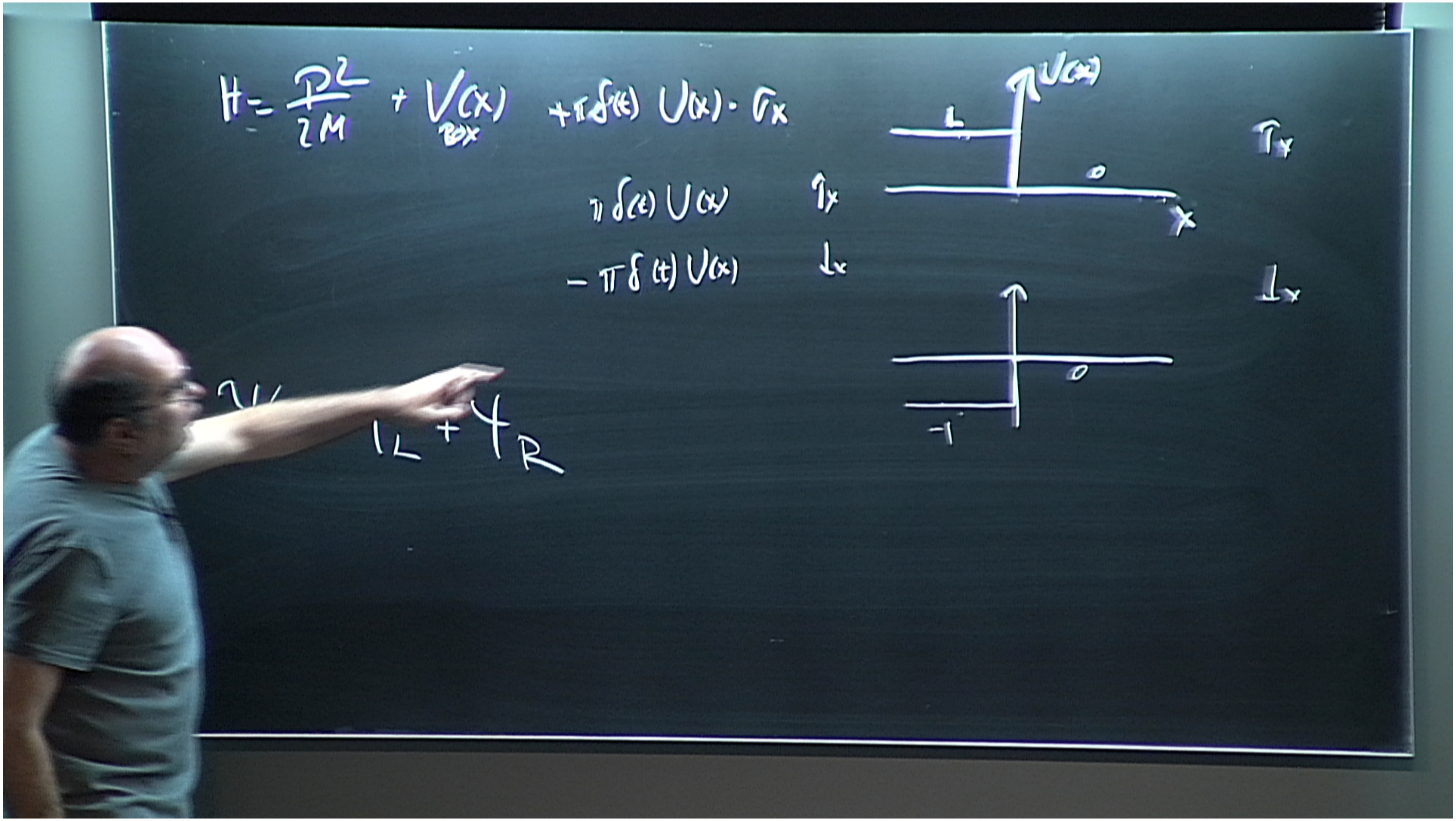

Y. AHARONOV
R. SILVA
Y. GURYANOVA
— LOCAL, PROB ≈ 0, RESPONSIBLE FOR CHANGE OF AVERAGE ENERGY
— NONLO
PROB ≈ 1, RESP. FOR REDISTRIB OF ENERGY SPETRUM


Y. AHARONOV
R. SILVA
Y. GURYANOVA
— LOCAL, PROB ≈ 0, RESPONSIBLE FOR CHANGE OF AVERAGE ENERGY
— NONLOCAL PROB ≈ 1, RESP. FOR REDISTRIB OF ENERGY SPECTRUM

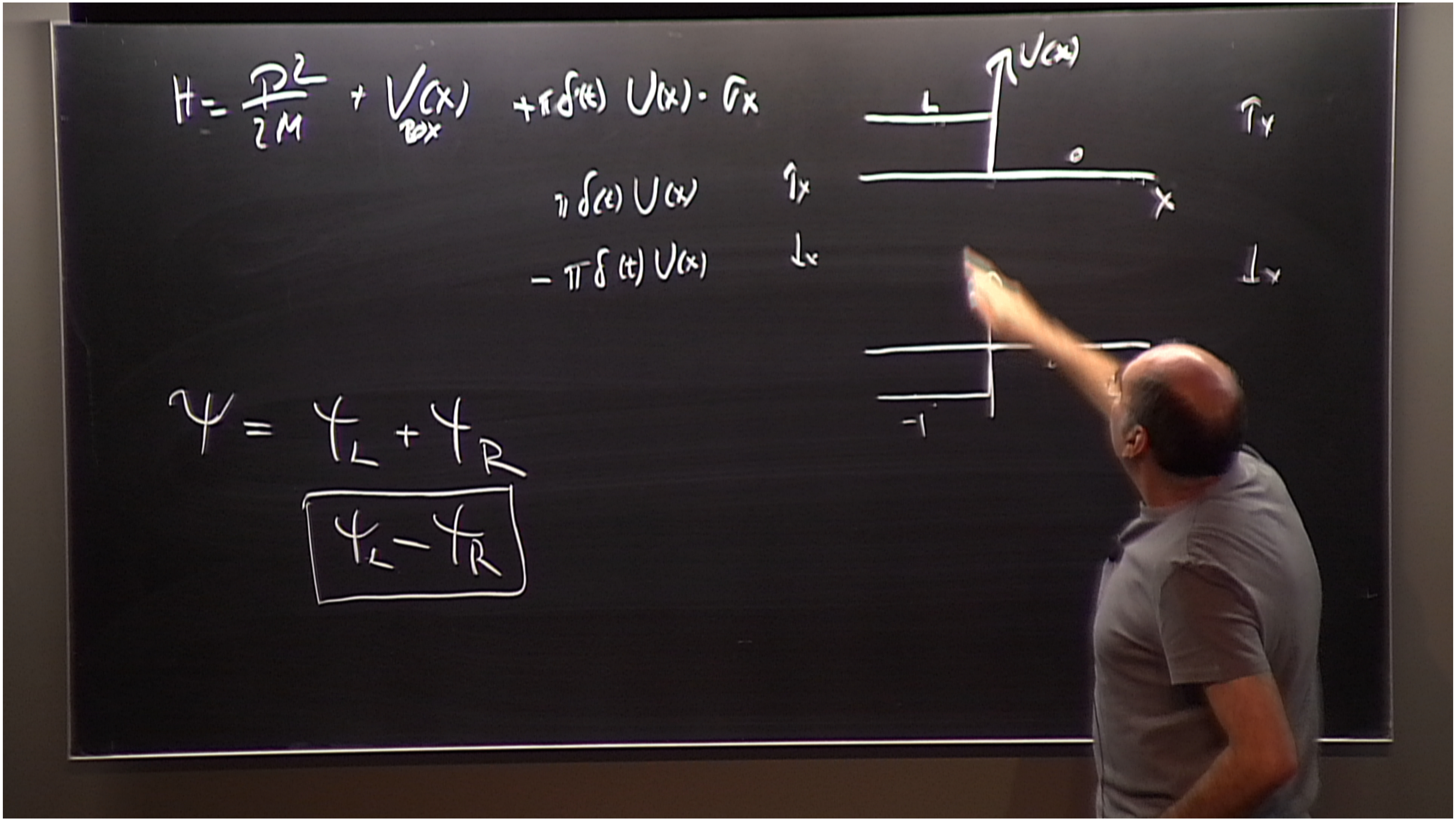

H = P²/2M + V_BOX(x) + U(x) · σx
V(x)
L
0
x

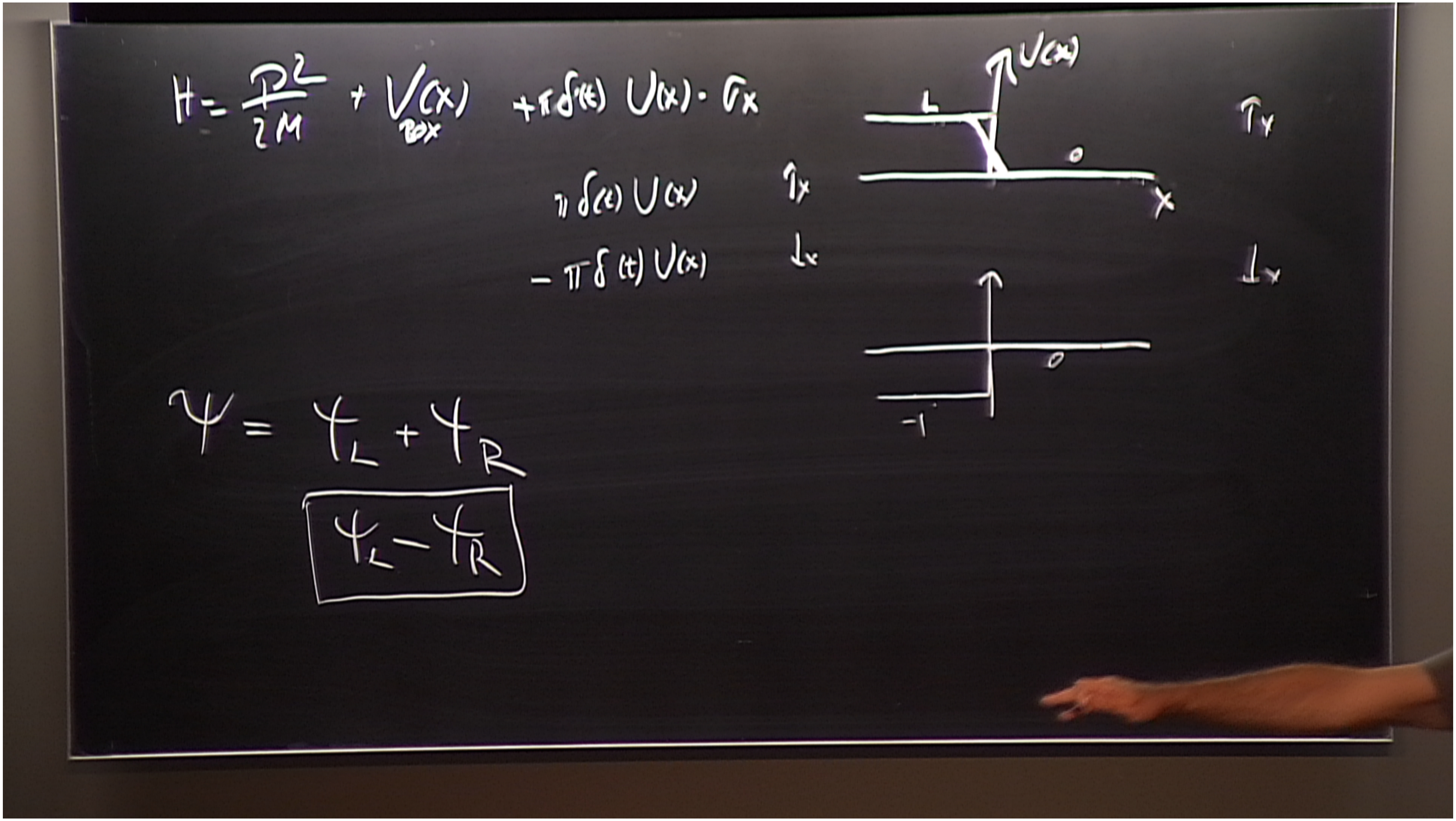

H = P2/2M + V(x) + π δ(t) U(x) · σx
BOX
V(x)
L
0
x

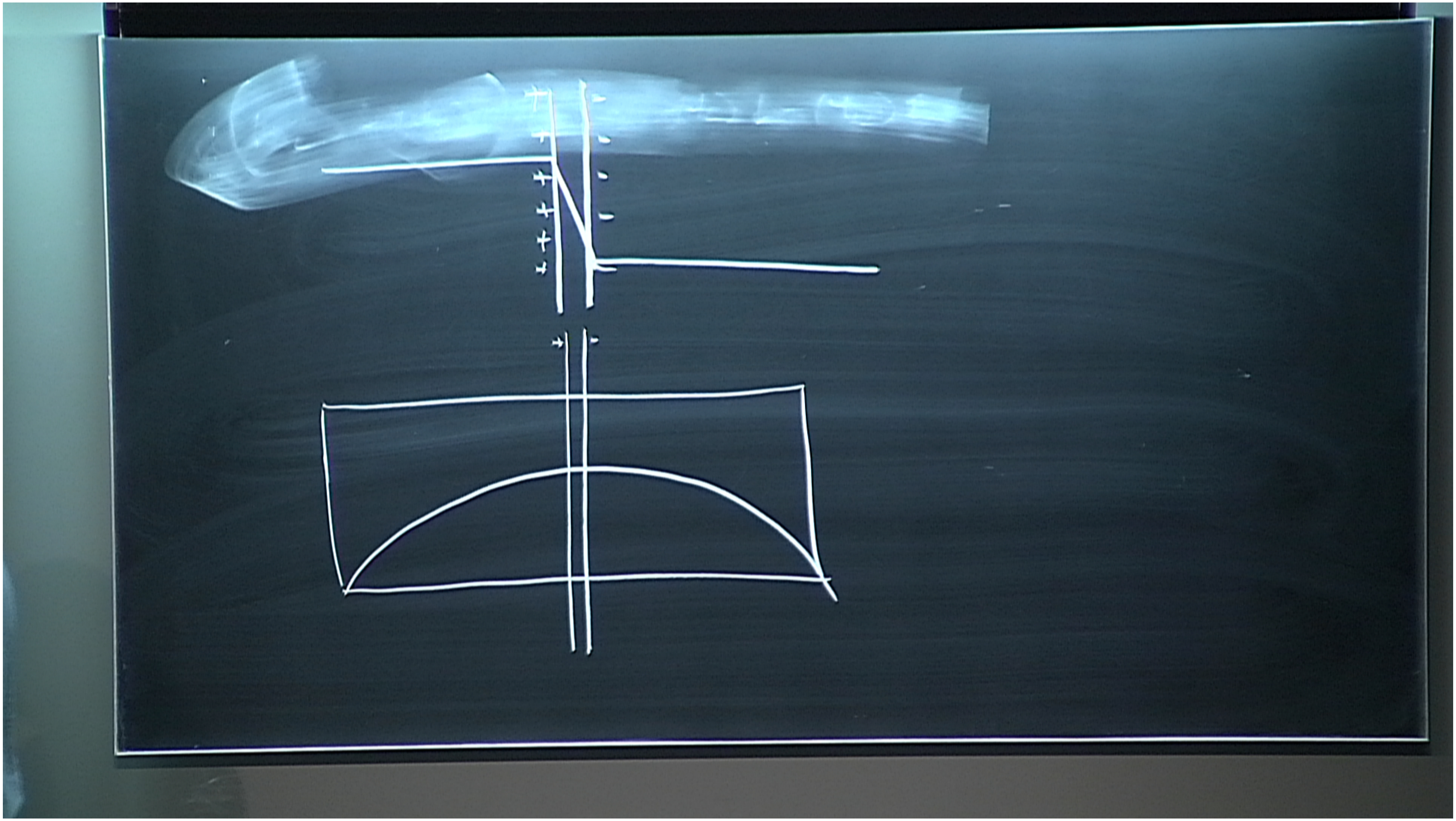

H = P²/2M + V_BOX(x) + π δ(t) U(x) · σx
π δ(t) U(x)   ↑x
− π δ(t) U(x)   ↓x
V(x)
L
0
x
↑x
↓x

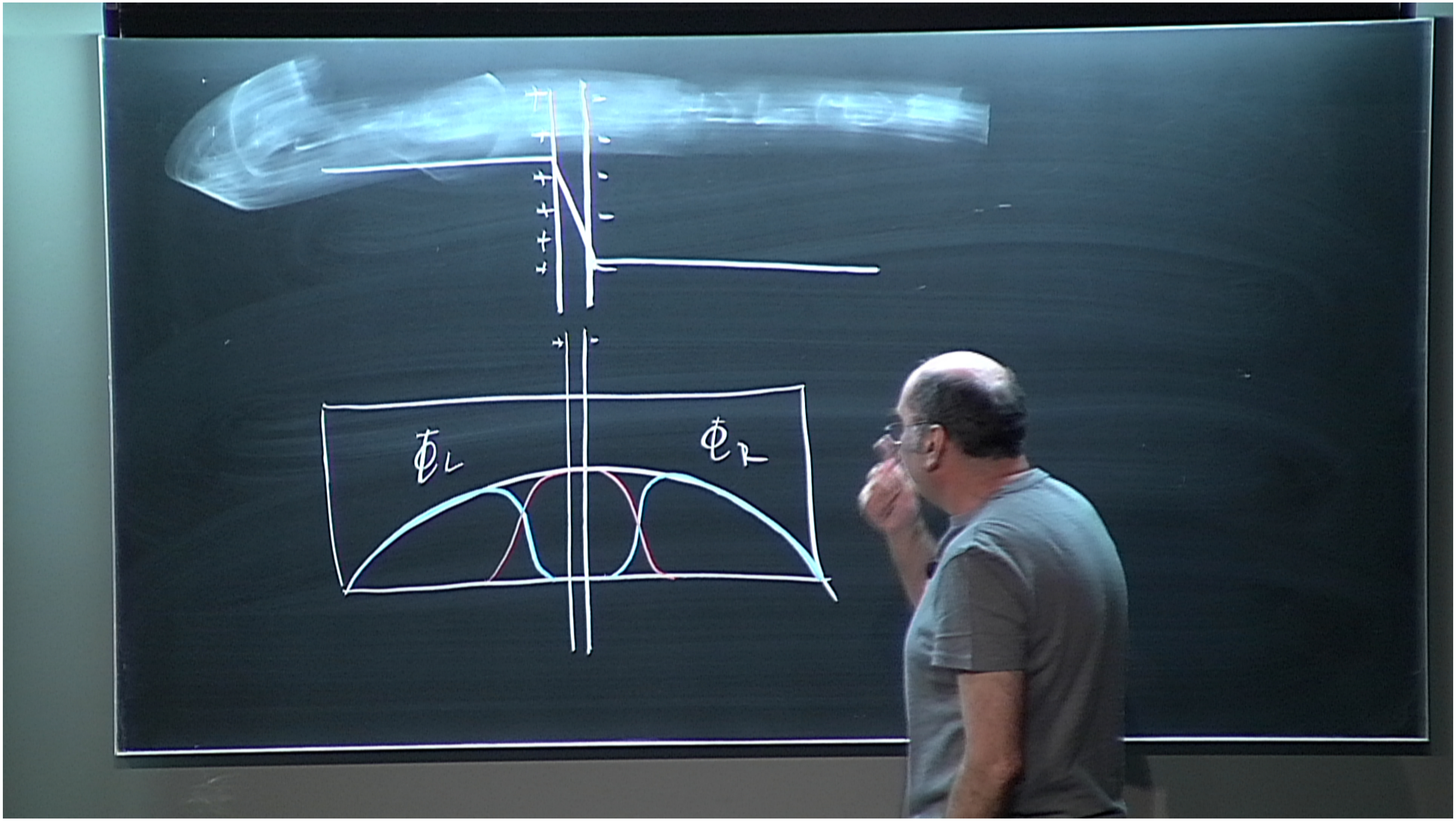

$H = \frac{P^2}{2M} + V_{BOX}(x) + \pi\delta(t)\, U(x) \cdot \sigma_x$
$\pi\delta(t)\, U(x)$ $\uparrow_x$
$-\pi\delta(t)\, U(x)$ $\downarrow_x$
$U(x)$
1
0
x
$\uparrow_x$
$\downarrow_x$
0
-1
$\psi_L + \psi_R$

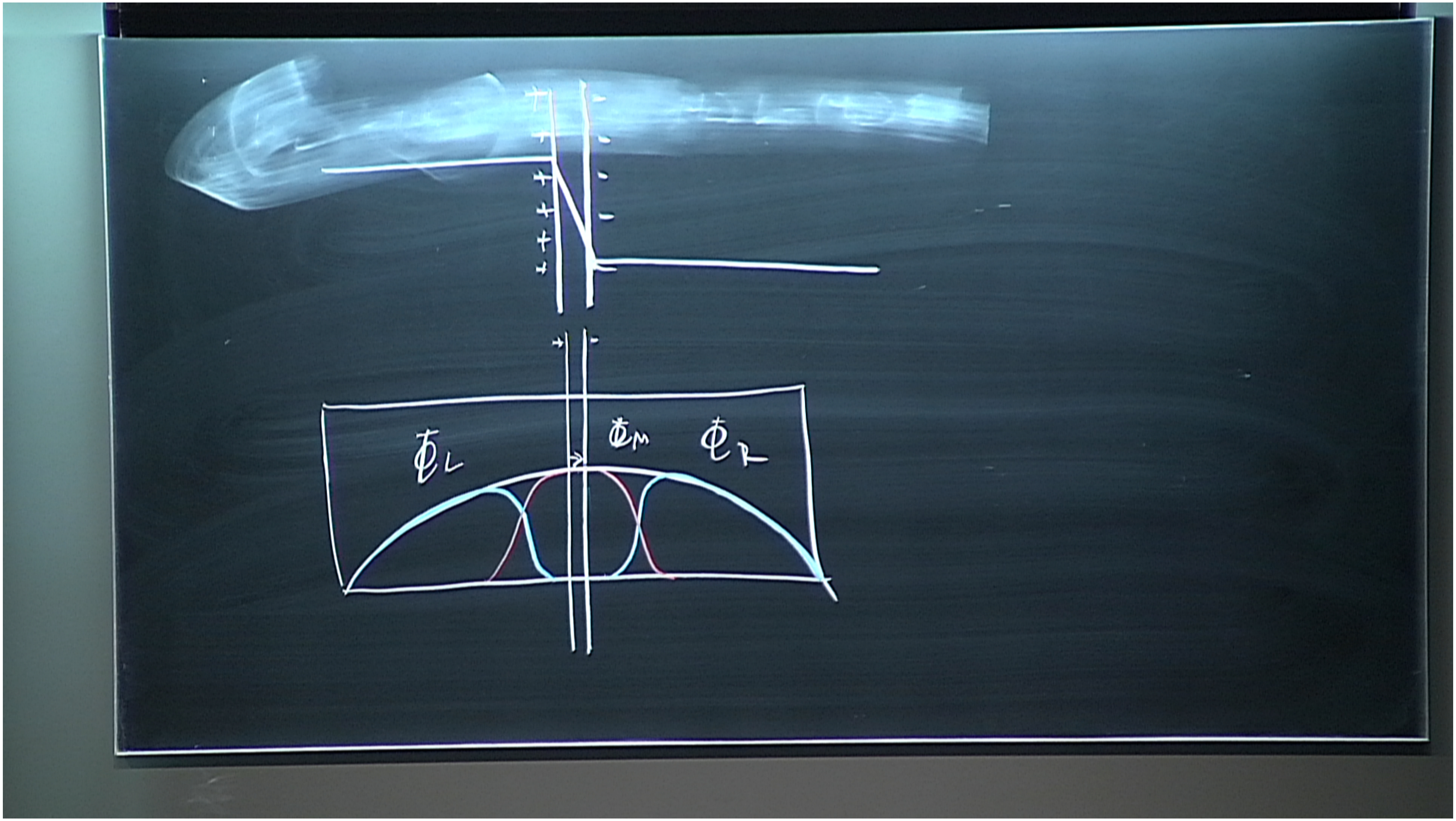
$$\left(|\psi_L\rangle + |\psi_R\rangle\right) T_L \rightarrow |\psi_L\rangle \downarrow + |\psi_R\rangle \uparrow$$


H = p^2/2M + V_BOX(x) + π δ(t) U(x) · σx
π δ(t) U(x) ↑x
− π δ(t) U(x) ↓x
U(x)
x
↑x
↓x
Ψ = ψL + ψR
ψL − ψR

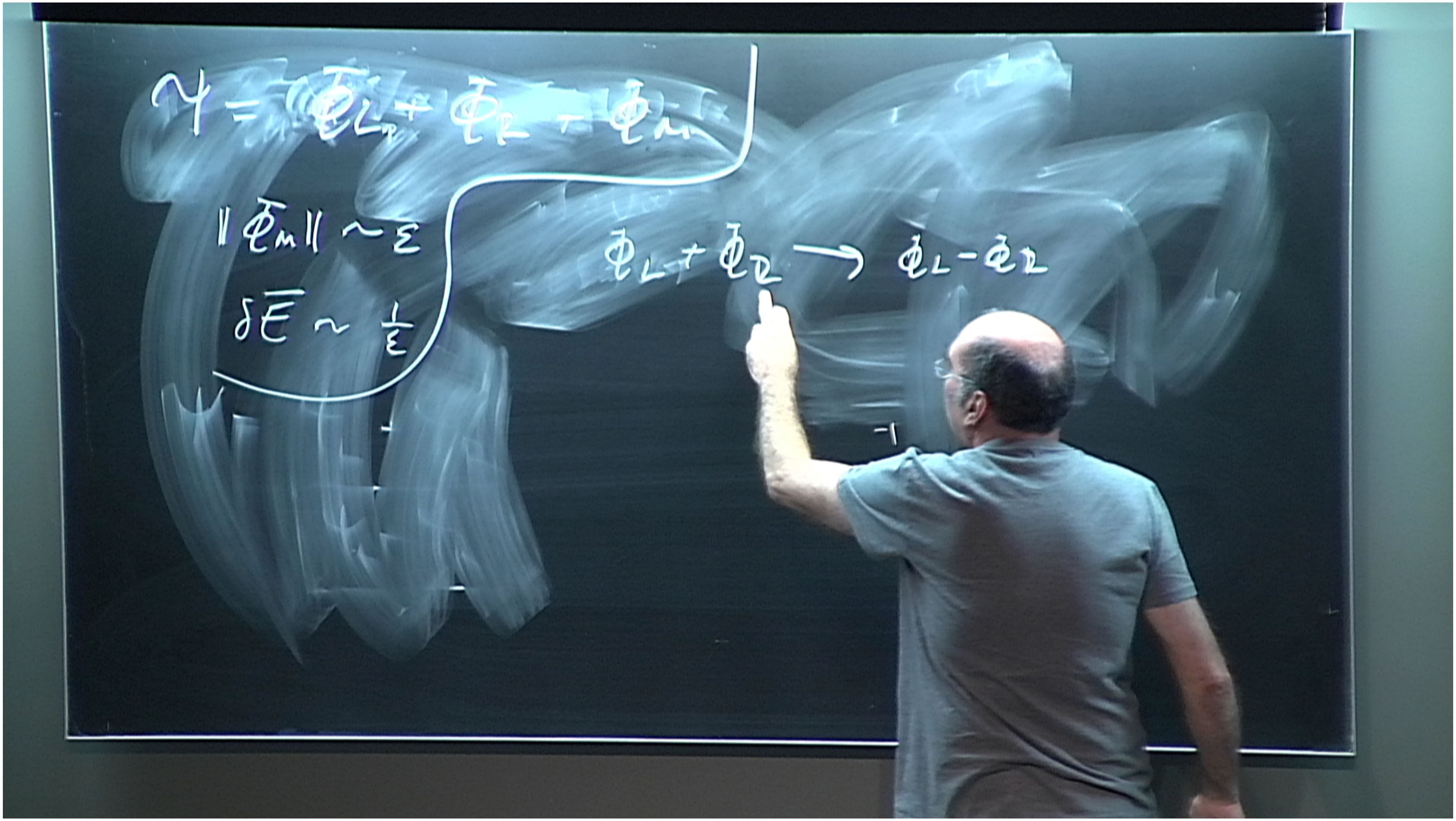

$H = \frac{P^2}{2M} + V_{Box}(x) + \pi \delta(t) U(x) \cdot \sigma_x$
$\pi \delta(t) U(x)$ $\uparrow_x$
$-\pi \delta(t) U(x)$ $\downarrow_x$
$\Psi = \Psi_L + \Psi_R$
$\Psi_L - \Psi_R$
$U(x)$
L
0
x
$\uparrow_x$
$\downarrow_x$
0
-1

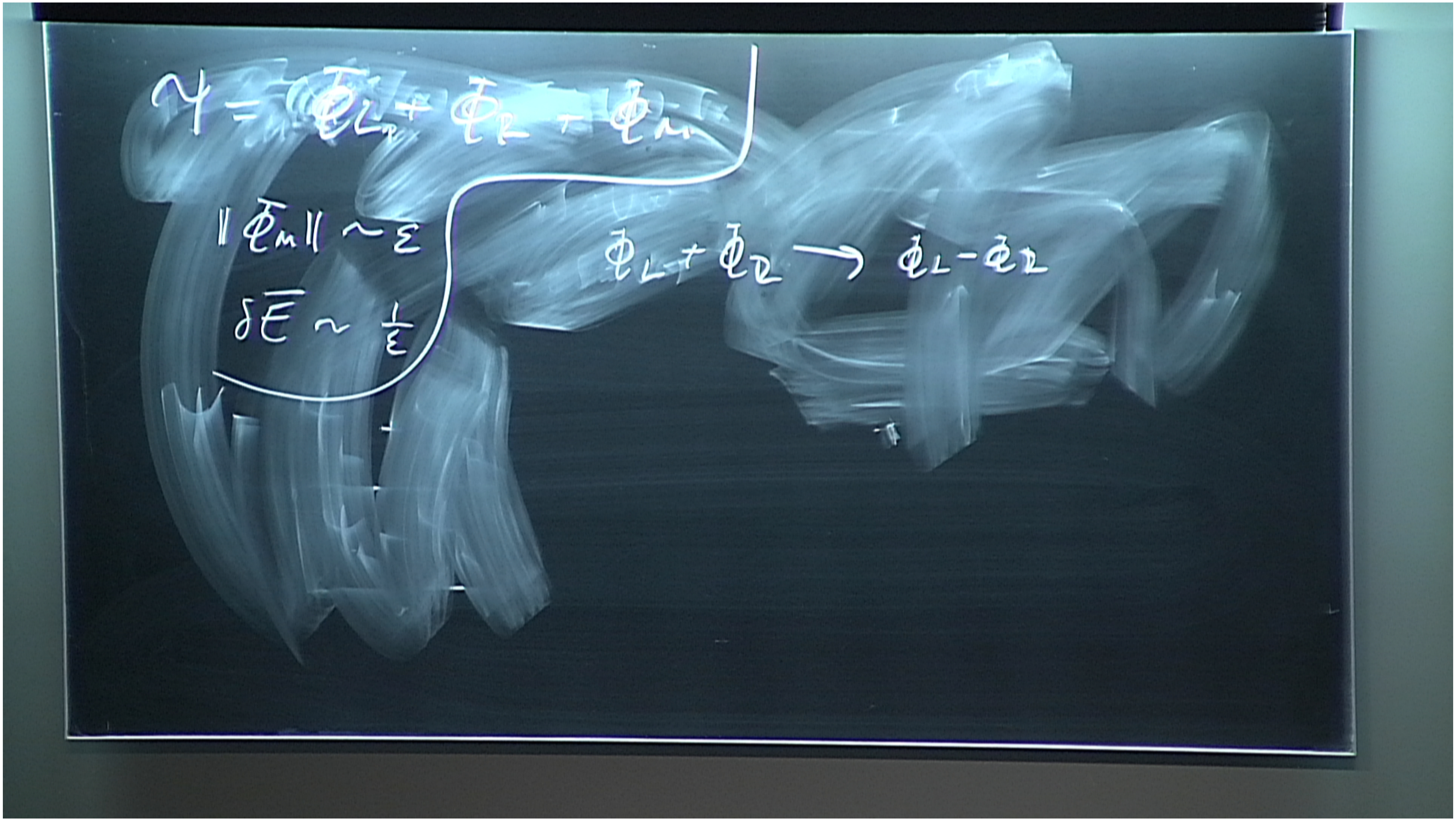


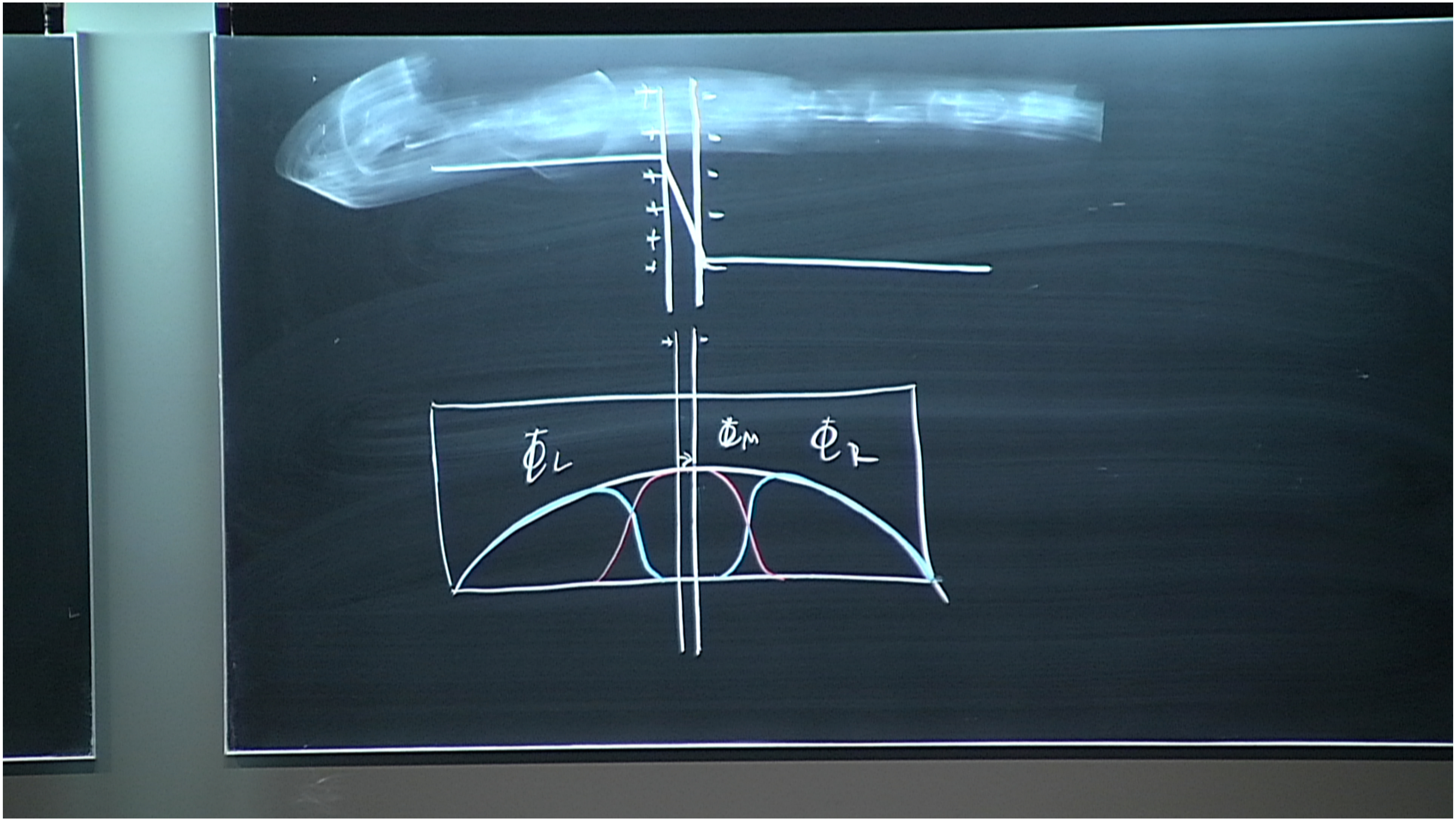

Φ_L
Φ_R

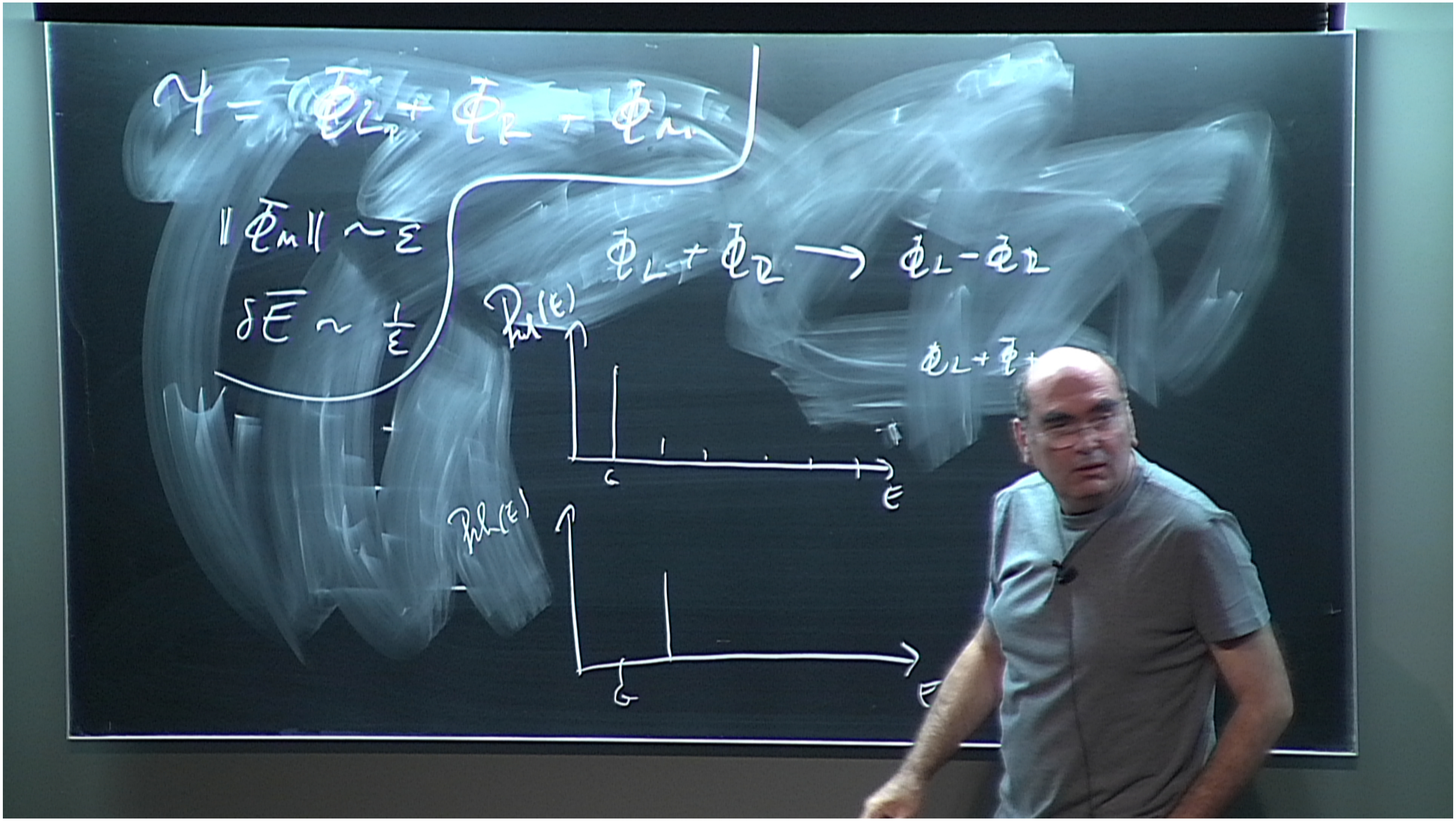


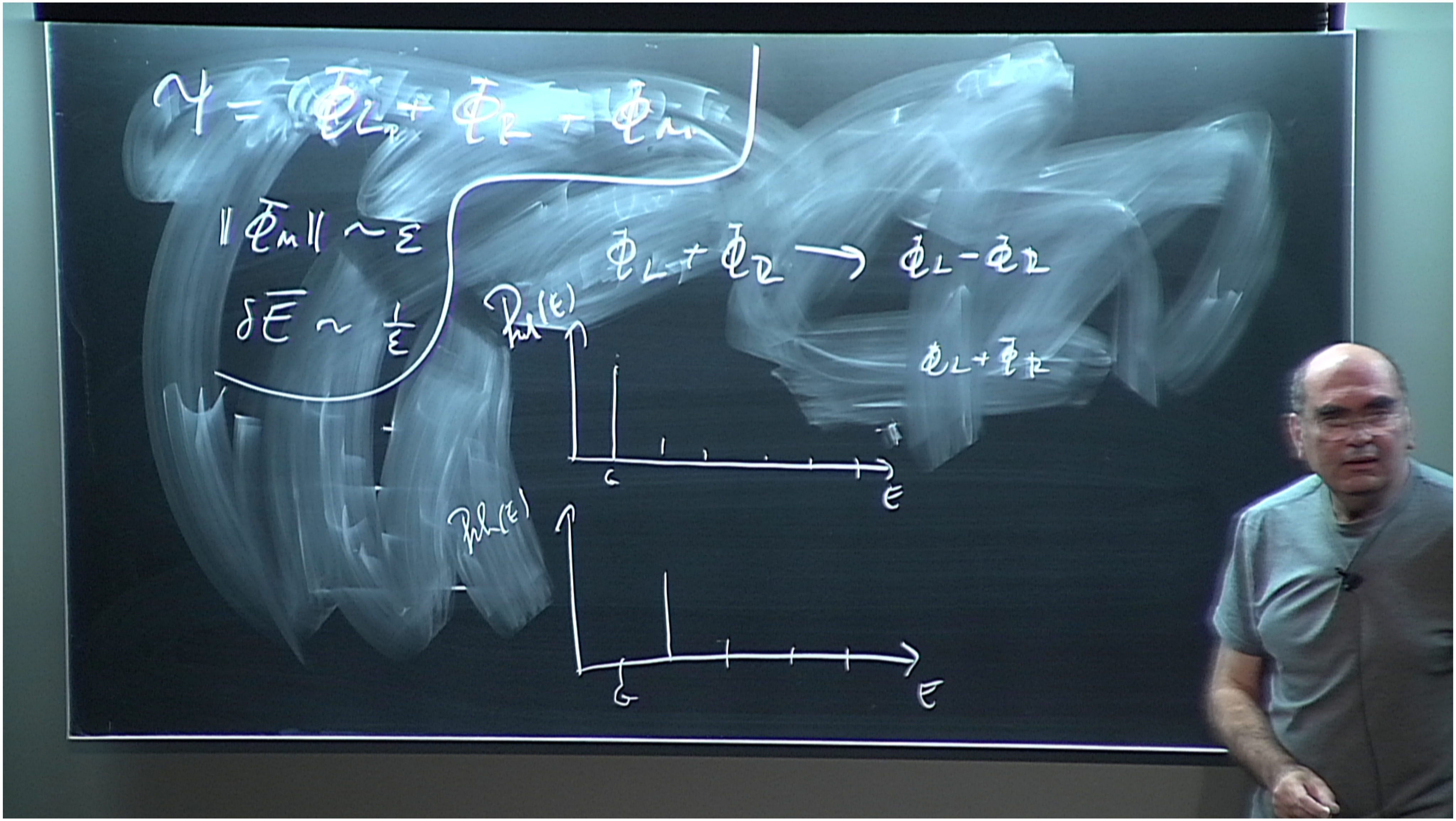
Φ_L
Φ_M
Φ_R

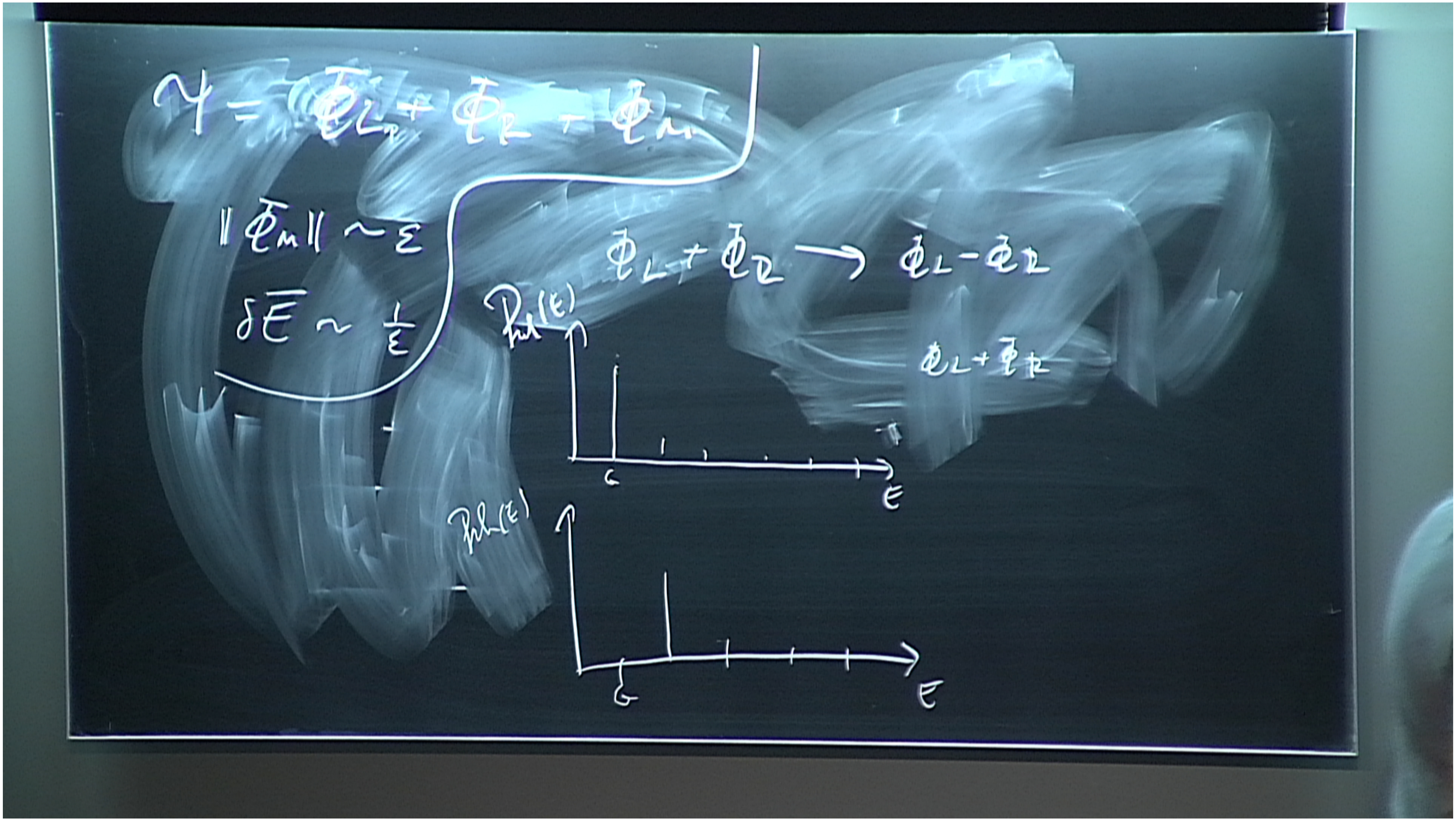

Ψ = Φ_L + Φ_R + Φ_M
‖Φ_M‖ ~ ε
δE ~ 1/ε
Φ_L + Φ_R → Φ_L − Φ_R

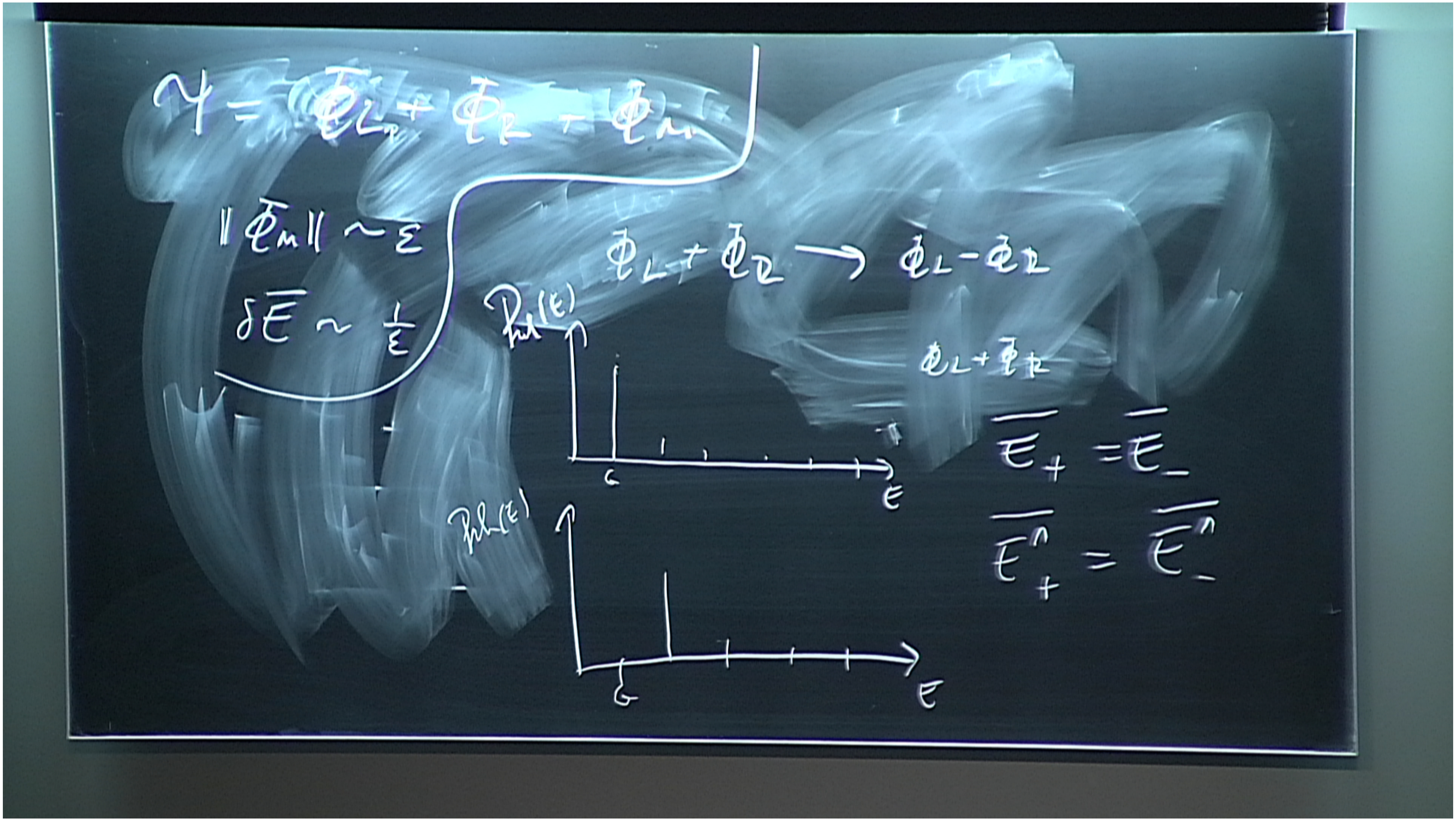

Ψ = Φ_L + Φ_R + Φ_M
‖Φ_M‖ ~ ε
δE ~ 1/ε
Φ_L + Φ_R → Φ_L − Φ_R


Φ_L
Φ_M
Φ_R

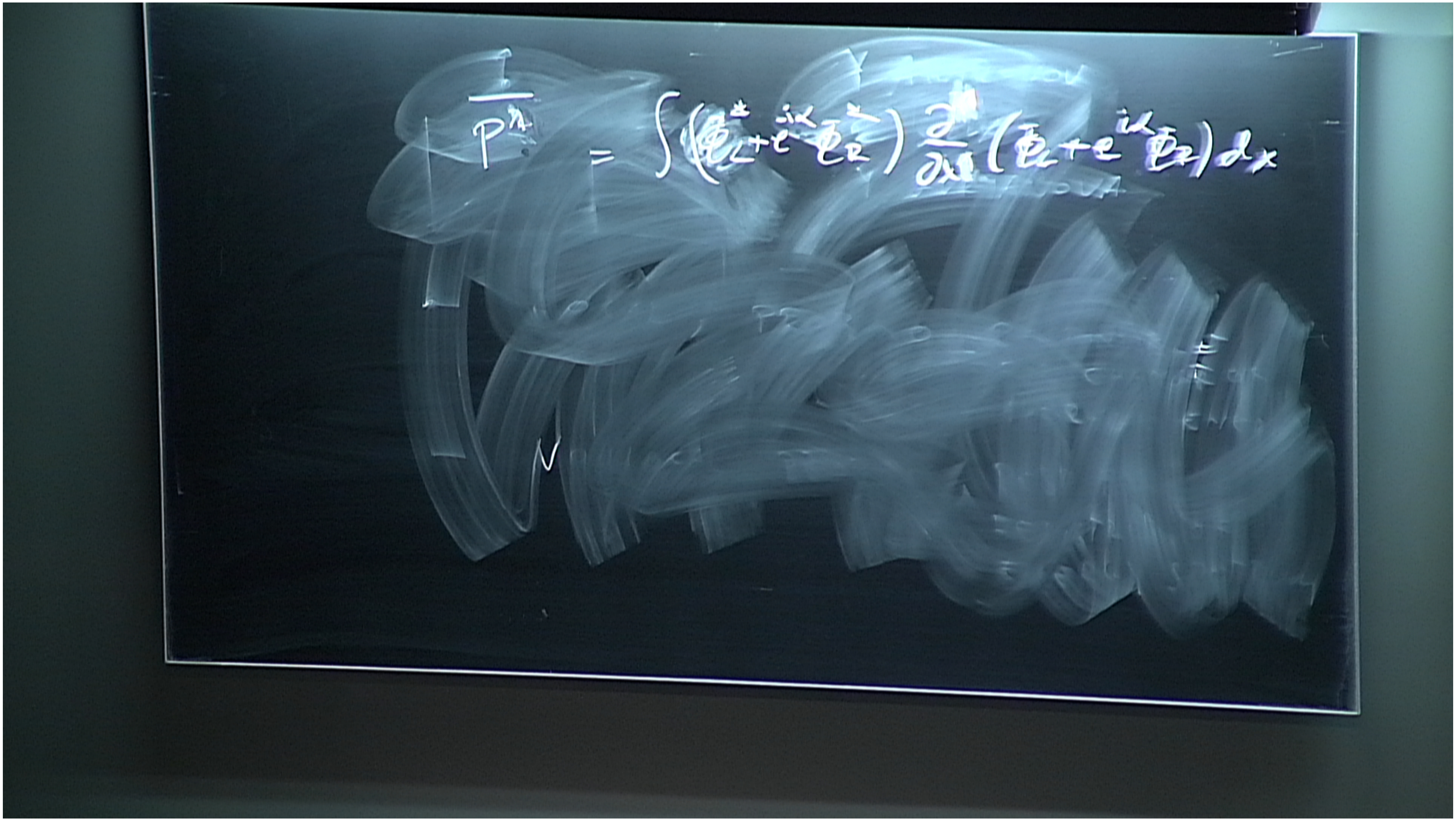

‖Φ_M‖ ~ ε
δE ~ 1/ε
Φ_L + Φ_R → Φ_L − Φ_R
ε

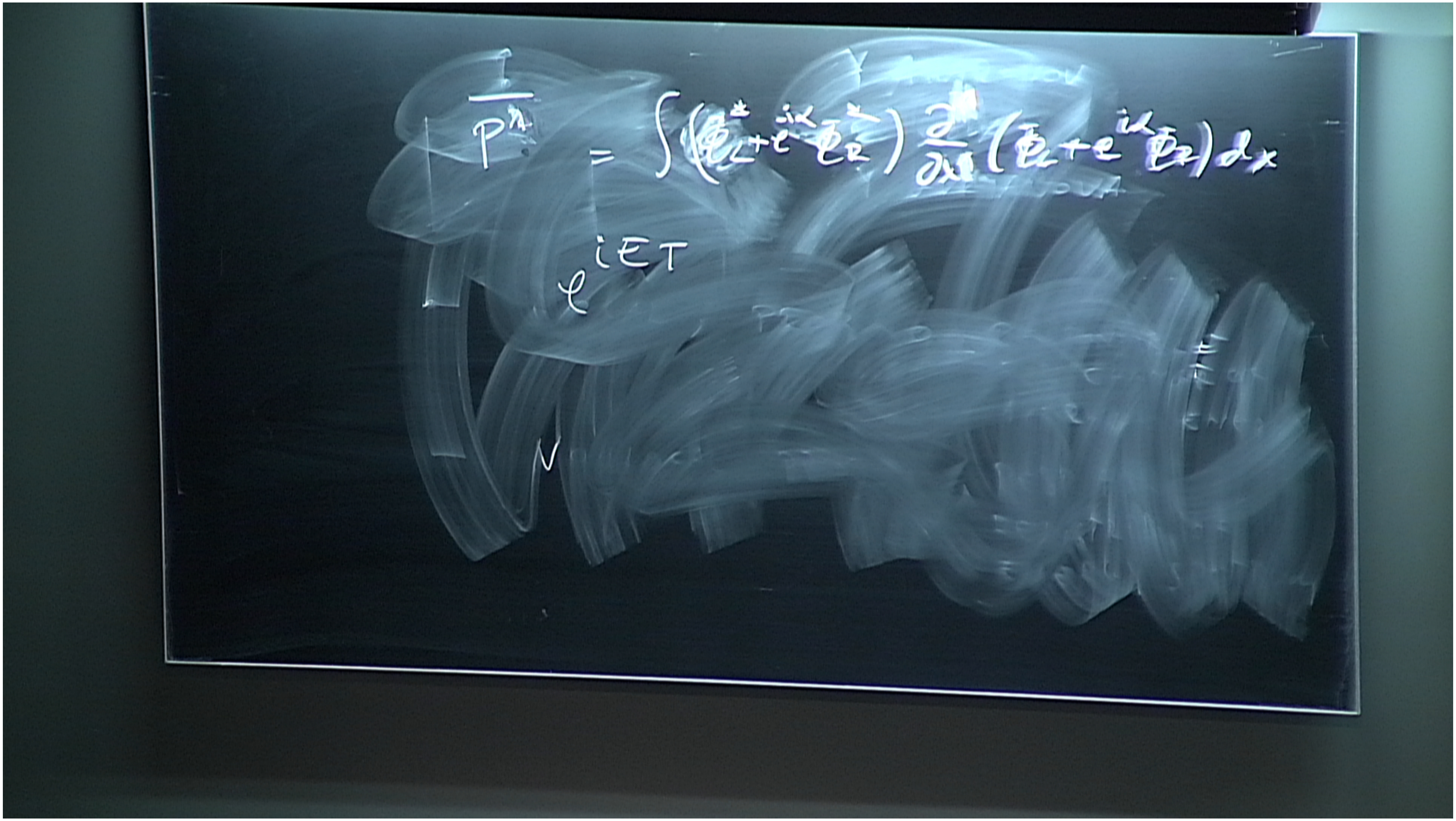


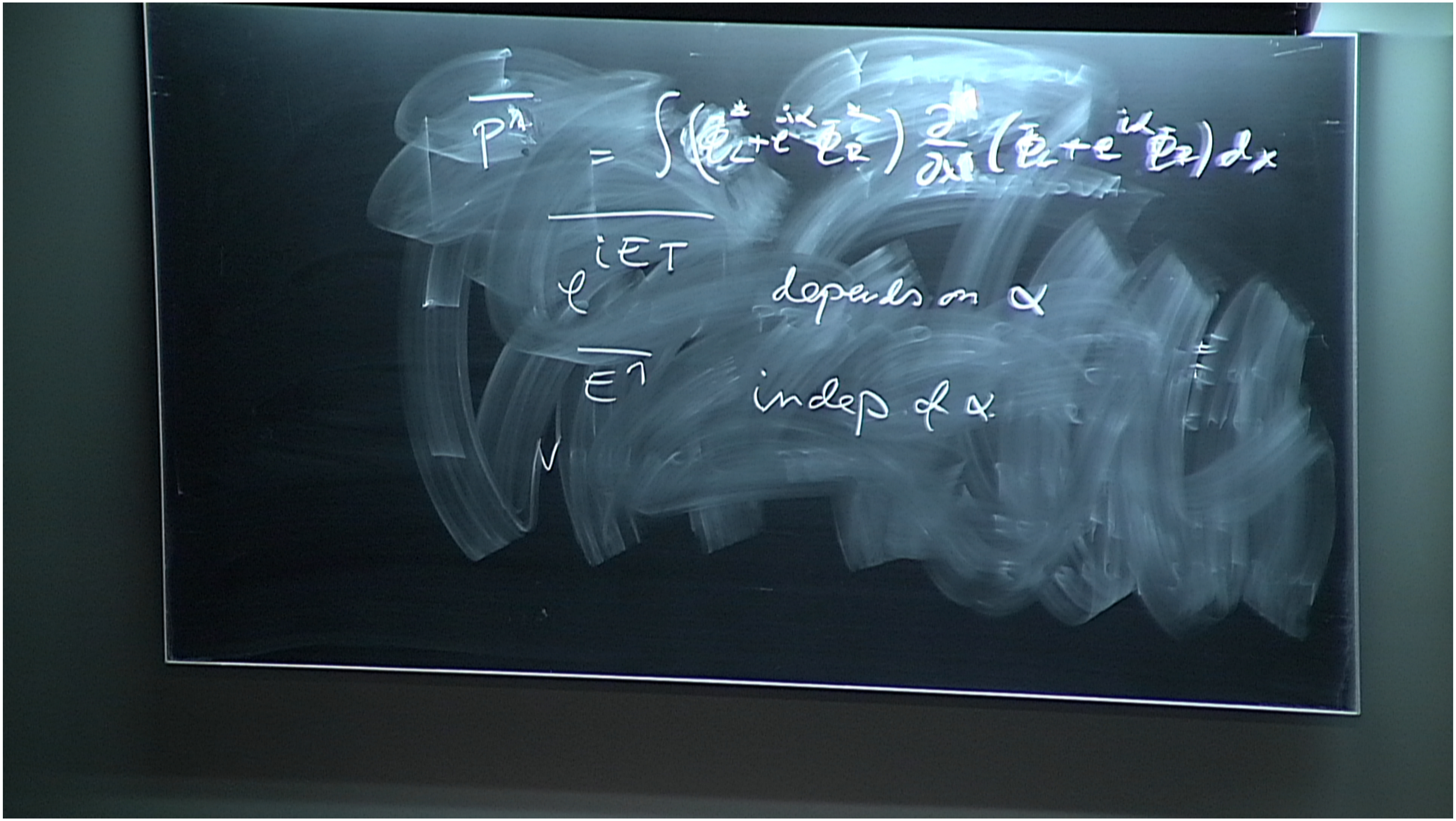

$\|\Phi_M\| \sim \varepsilon$
$\delta E \sim \frac{1}{\varepsilon}$
$\Phi_L + \Phi_R \longrightarrow \Phi_L - \Phi_R$
$\Phi_L + \Phi_R$
E
E

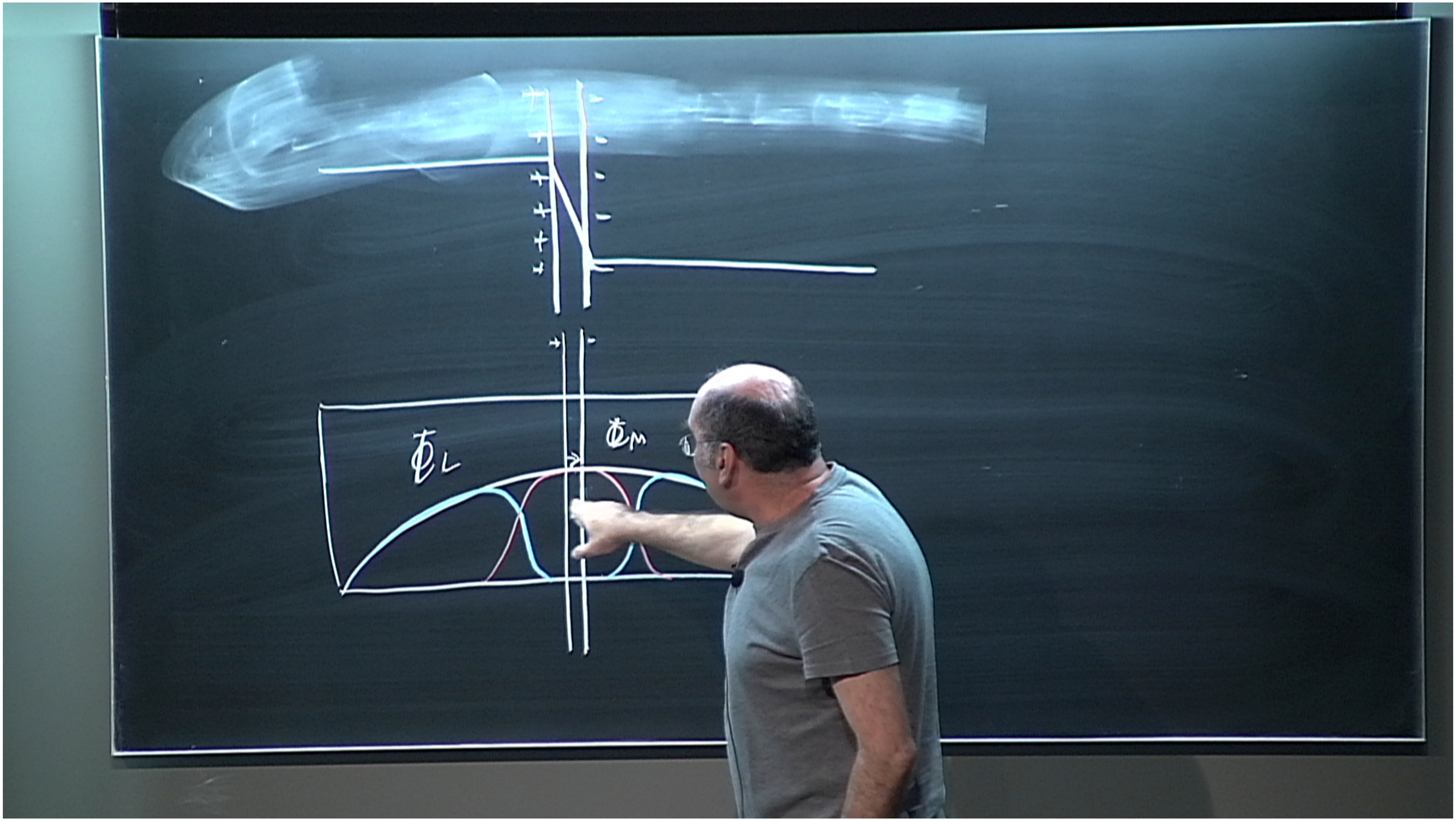


$\Psi = \Phi_L + \Phi_R + \Phi_M$
$\|\Phi_M\| \sim \varepsilon$
$\delta E \sim \frac{1}{\varepsilon}$
$\Phi_L + \Phi_R \longrightarrow \Phi_L - \Phi_R$
$\Phi_L + \Phi_R$
$\overline{E_+} = \overline{E_-}$
$\overline{E^n_+} = \overline{E^n_-}$
E
E

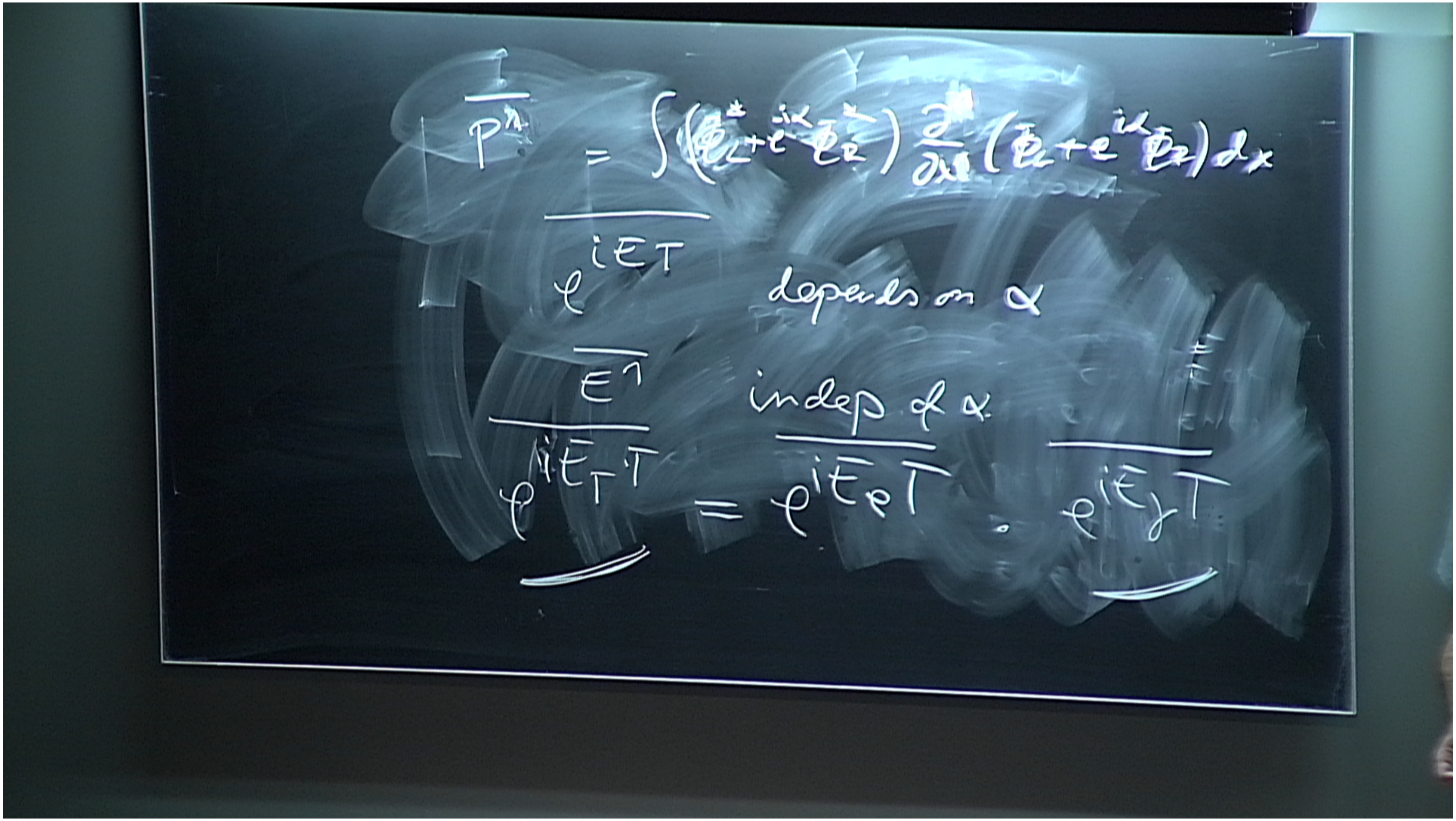

$\overline{P^{n}} = \int (\Phi_L^* + e^{-i\alpha}\Phi_R^*) \frac{\partial}{\partial x} (\Phi_L + e^{i\alpha}\Phi_R) \, dx$


$\overline{P^{x}} = \int (\Phi_L^{*} + e^{-i\alpha}\Phi_R^{*}) \frac{\partial}{\partial x} (\Phi_L + e^{i\alpha}\Phi_R)\, dx$
e^{iET}


P = ∫ (Φ_L* + e^{-iα} Φ_R*) ∂/∂x (Φ_L + e^{iα} Φ_R) dx
e^{iET} depends on α
E^T indep of α



Φ_L
Φ_M


depends on α
indep of α