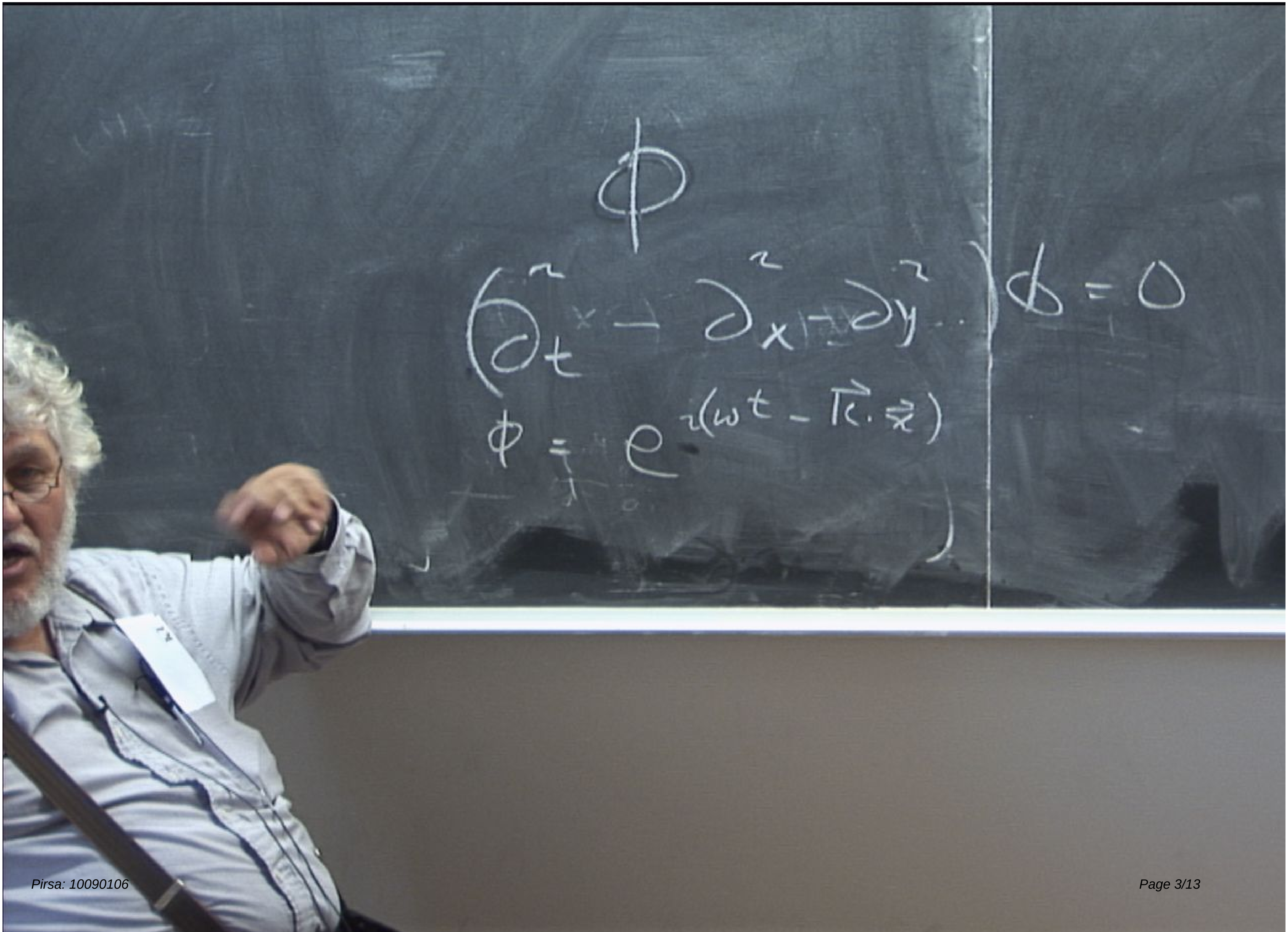
Title: PSI Special Lecture - Bill Unruh

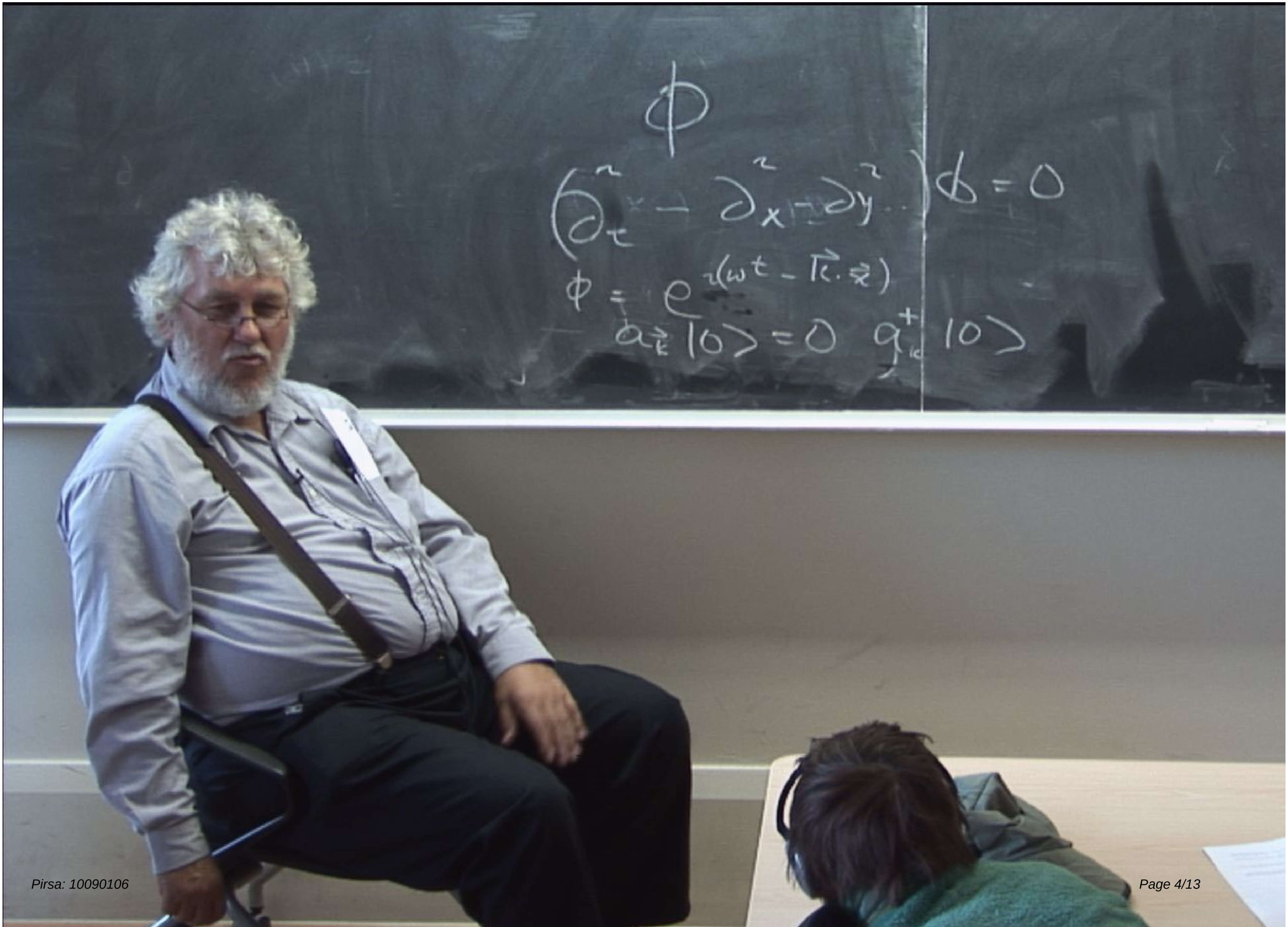
Date: Sep 24, 2010 01:30 PM

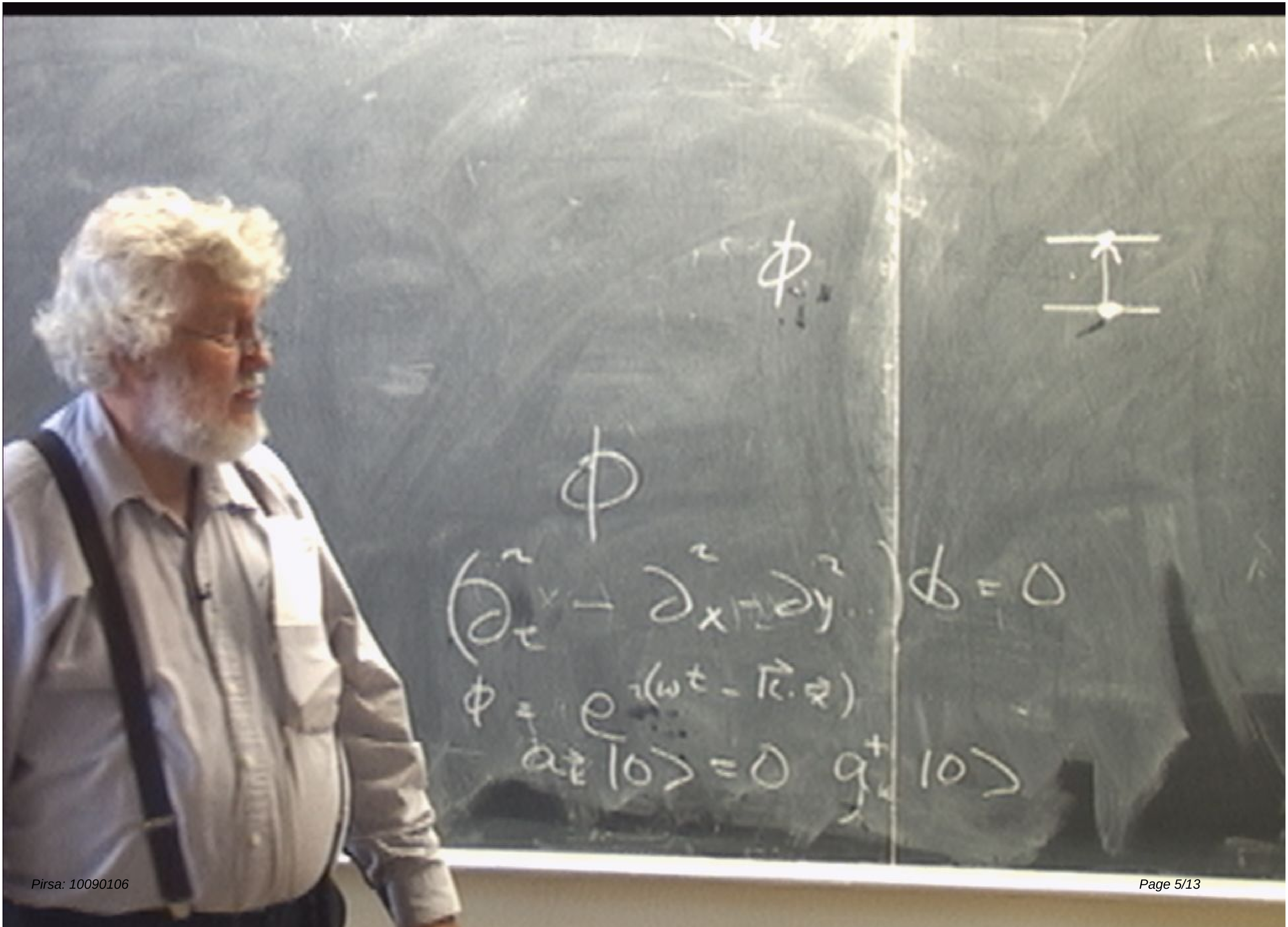
URL: http://pirsa.org/10090106

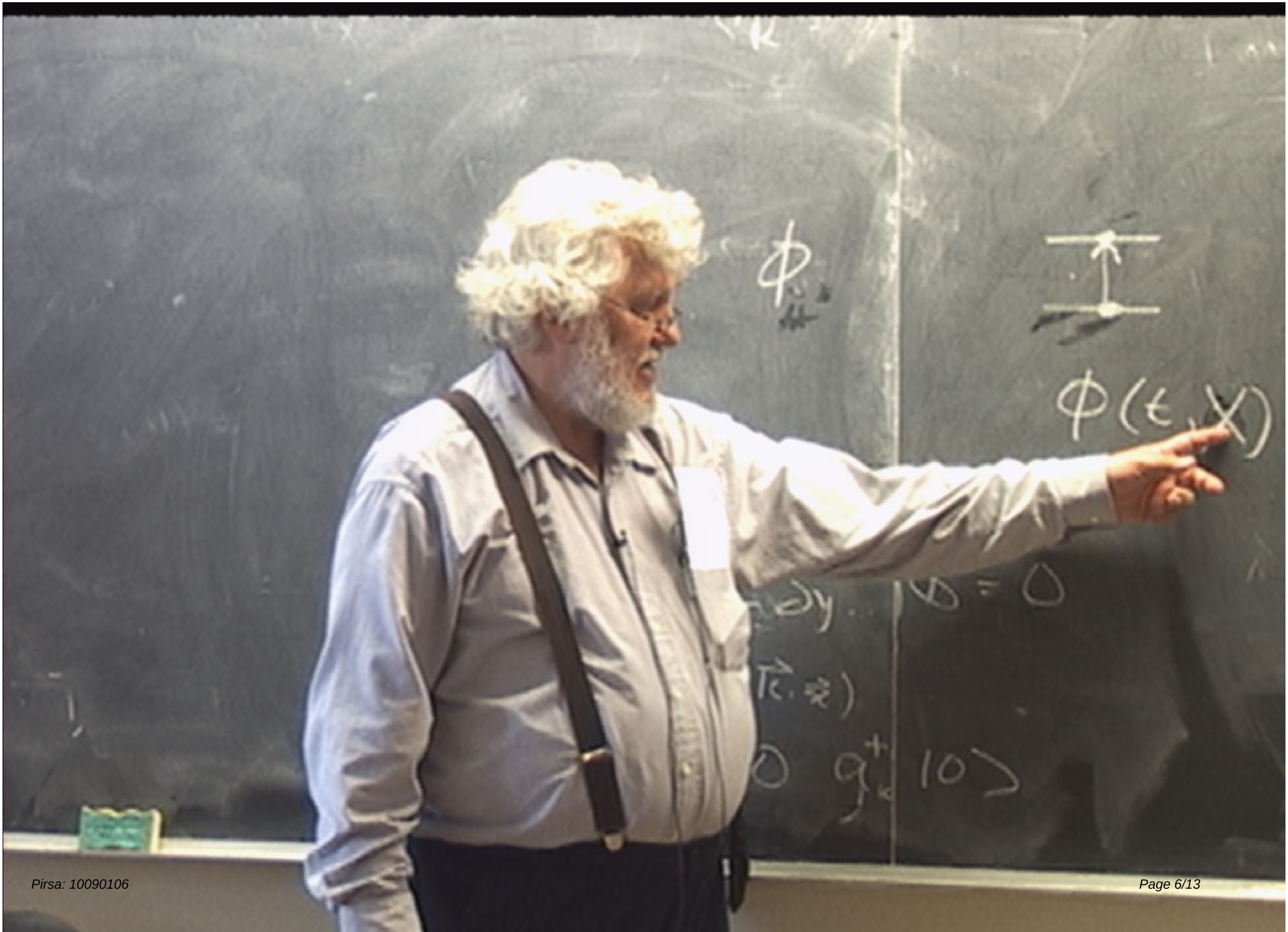
Abstract:

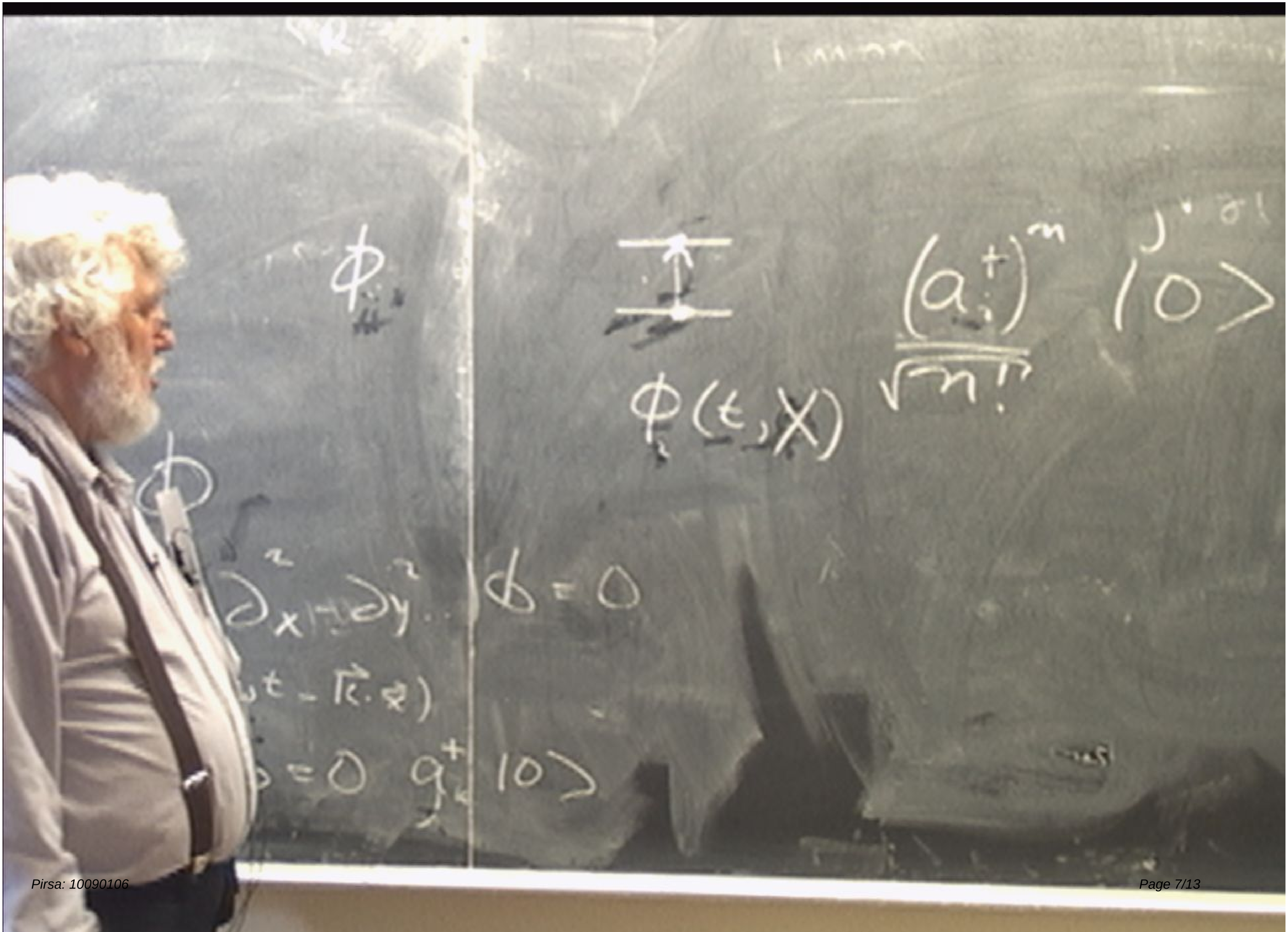
PERIMETER INSTITUTE FOR THEORETICAL PHYSICS

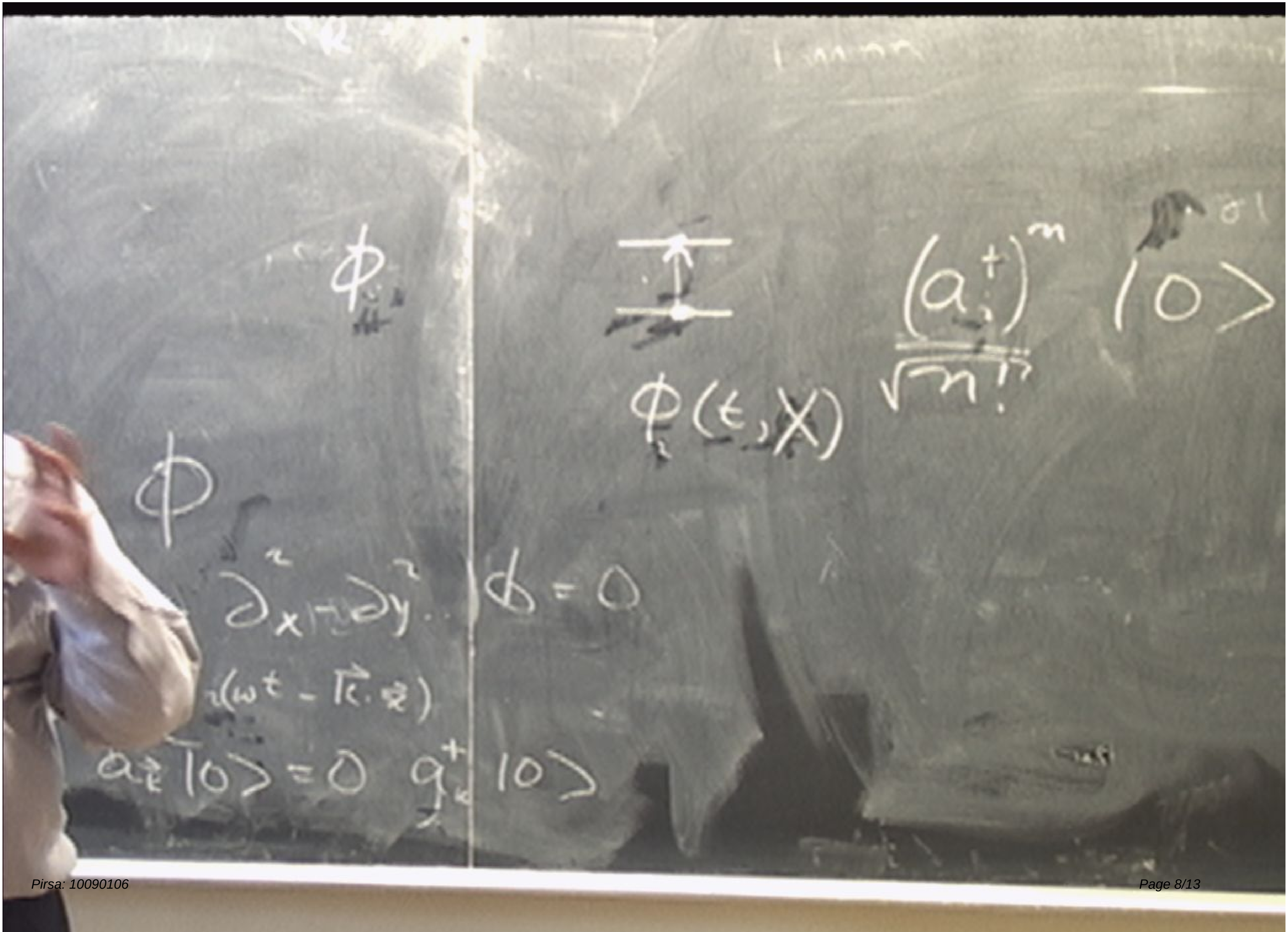

φ
(∂t² − ∂x² − ∂y² …) φ = 0
φ = e^{i(ωt − k·x)}

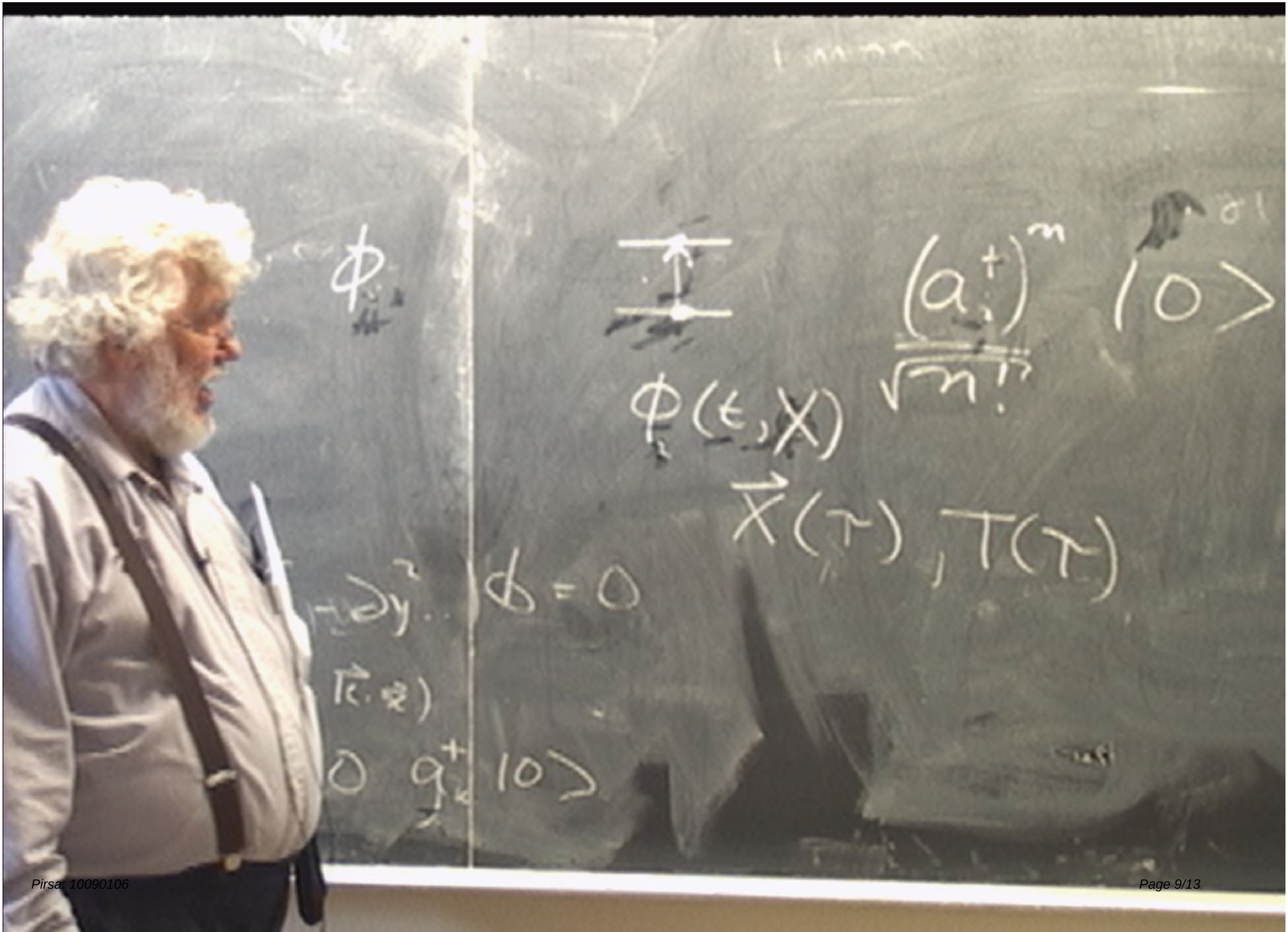

φ
(∂t² − ∂x² − ∂y² ...) φ = 0
φ = e^{i(ωt − k·x)}
a_k |0> = 0   a†_k |0>

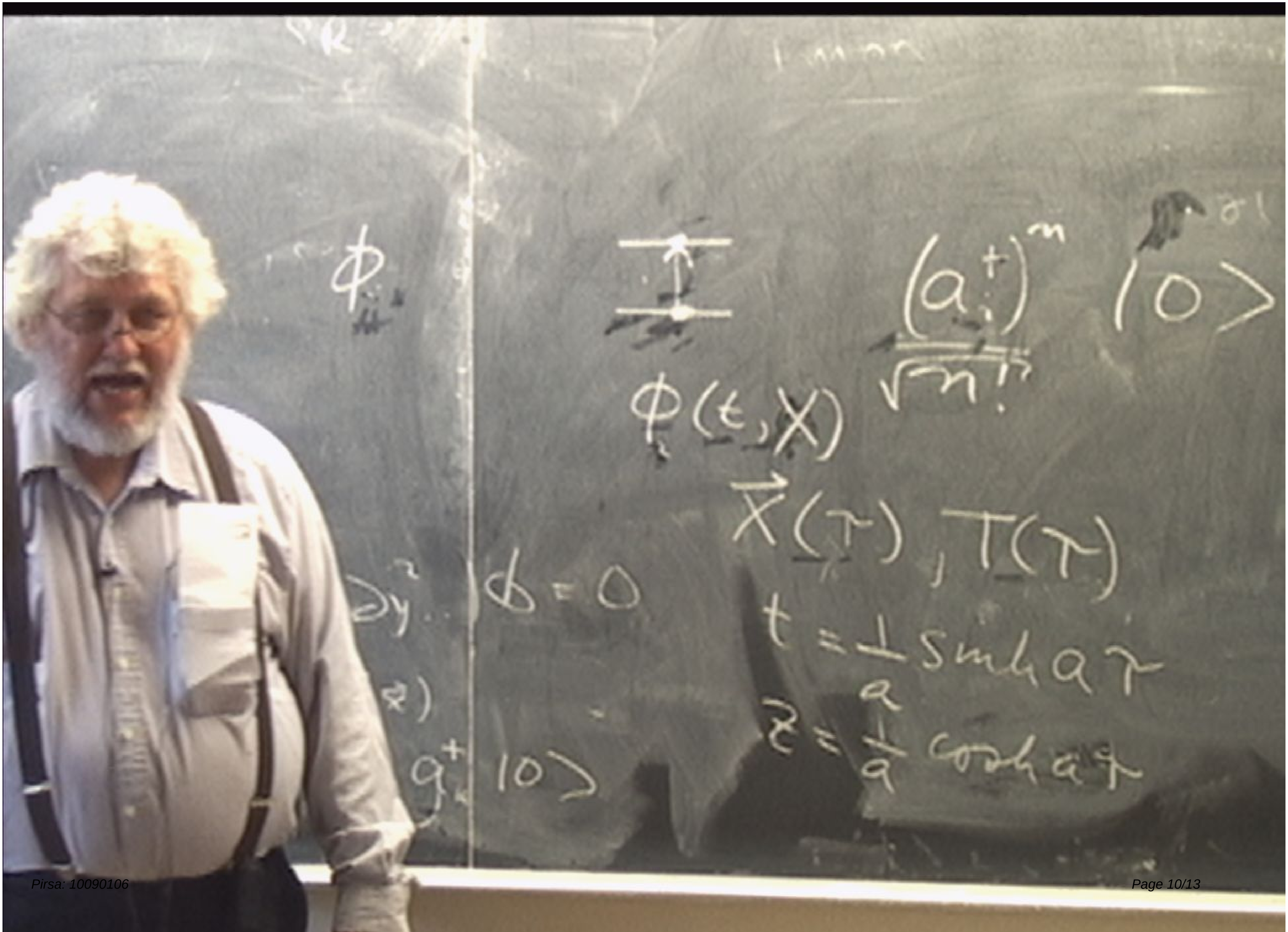

φ
φ
(∂t² − ∂x² − ∂y²) φ = 0
φ = e^{i(ωt − k·x)}
ak |0> = 0   ak† |0>


ϕ(t, x)

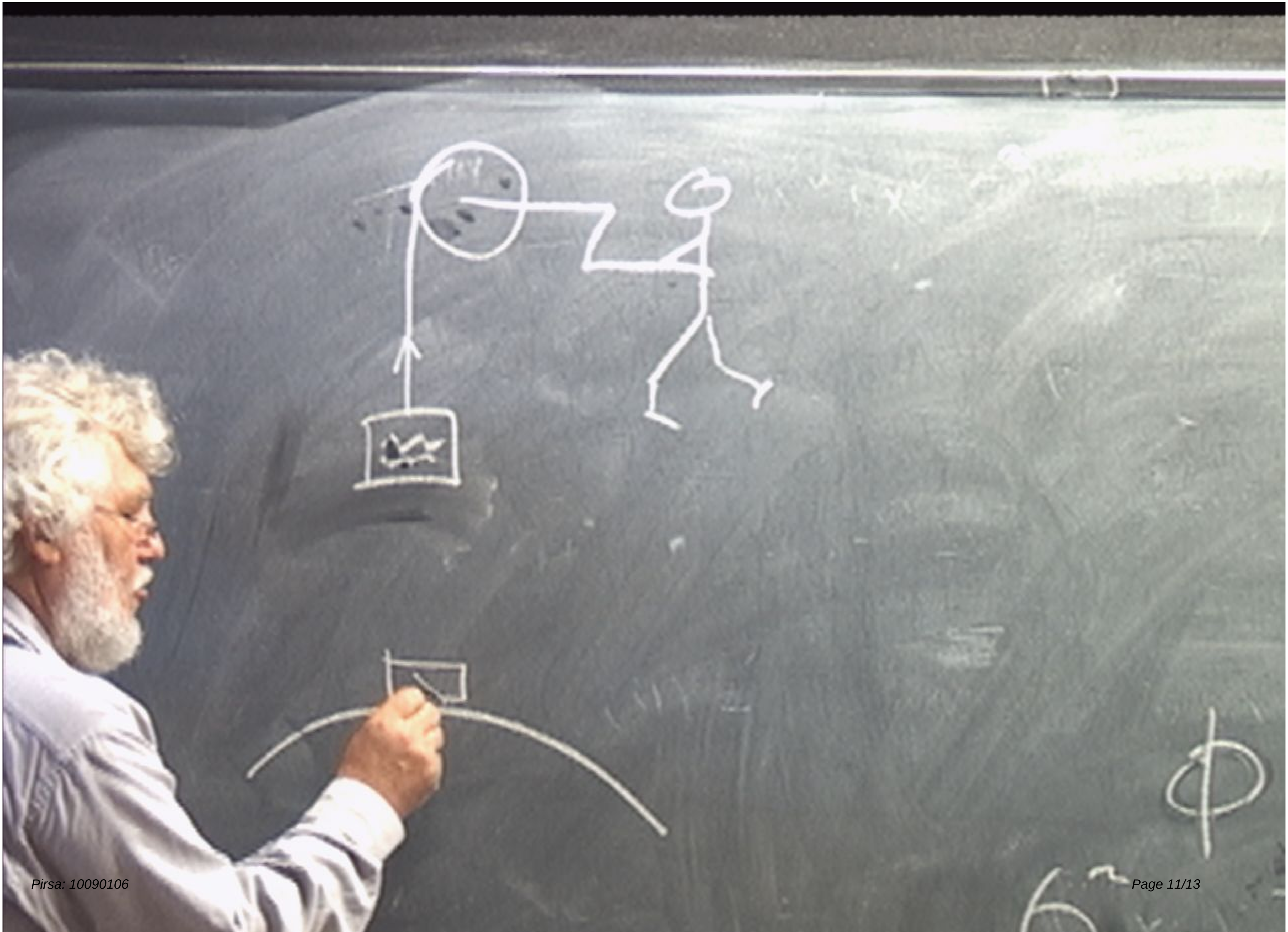

$\frac{(a^{+})^{n}}{\sqrt{n!}} |0>$
$\phi(t, X)$
$=0$
$|0>$

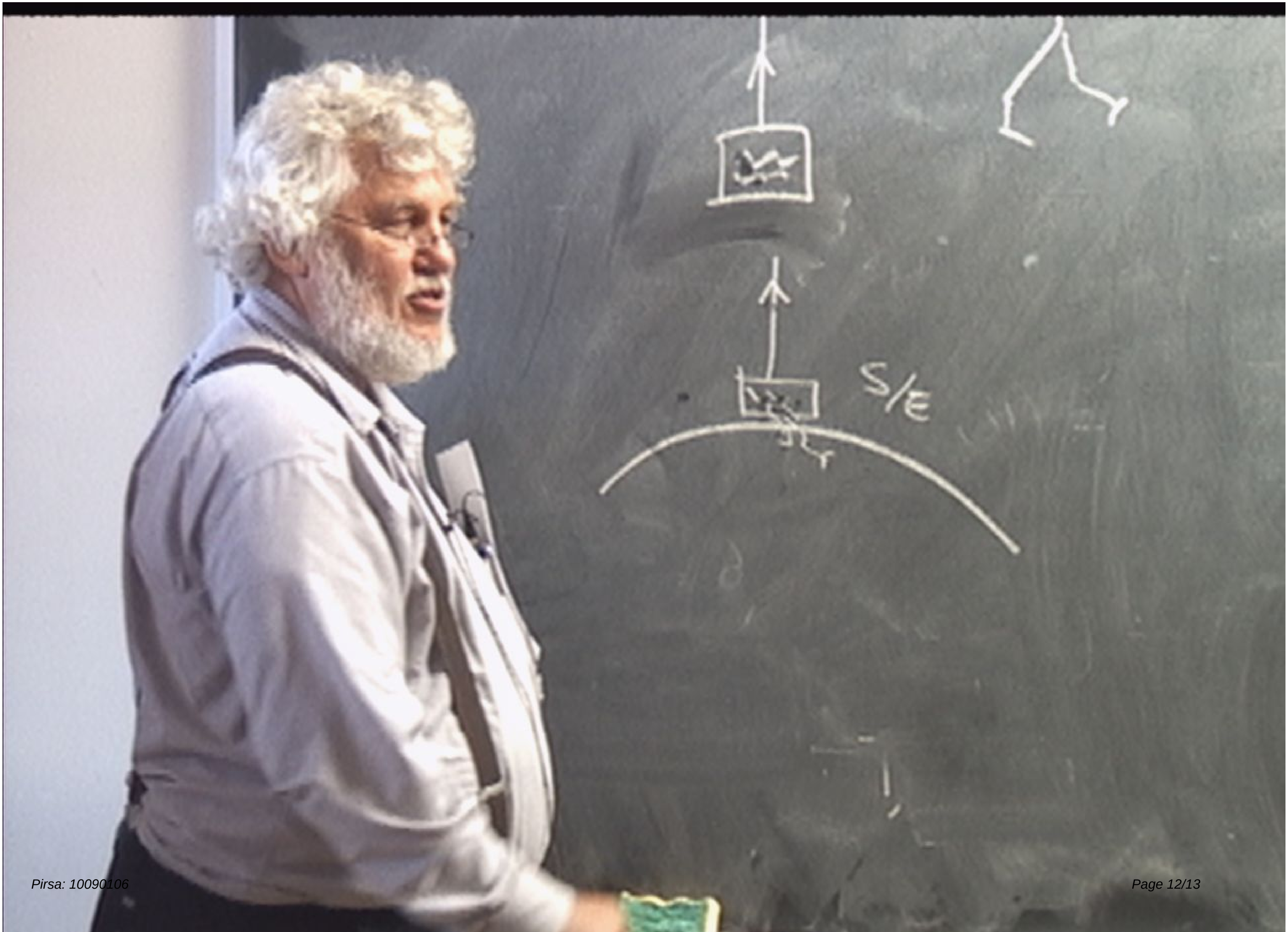

φ
(a†)^n / √n! |0>
φ(t, X)
φ
(∂x² + ∂y² ...) φ = 0
(ωt − k·x)
a_k |0> = 0   a†_k |0>

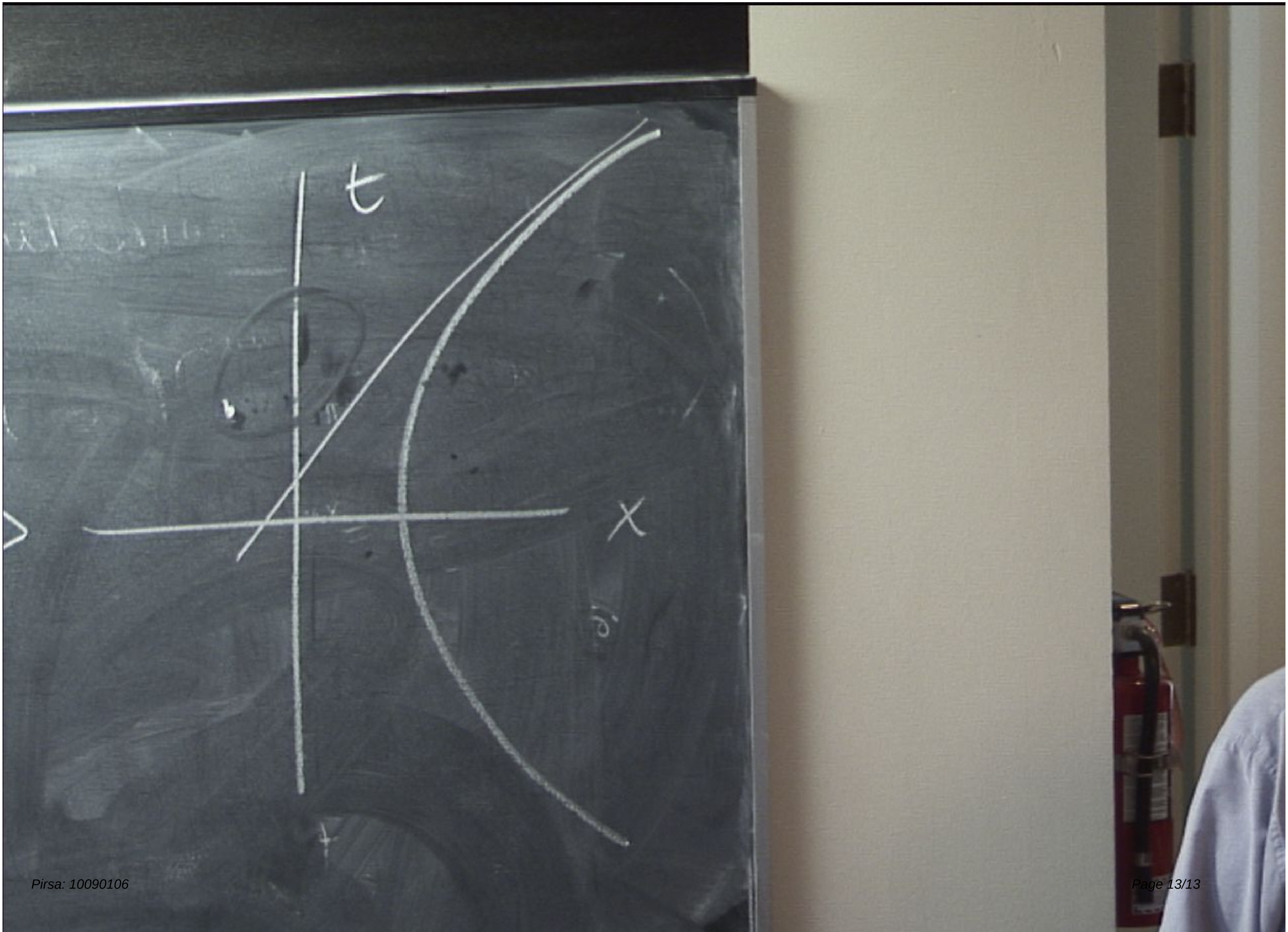

$\frac{(a_i^+)^n}{\sqrt{n!}} |0\rangle$
$\phi(t, X)$
$\vec{X}(\tau), T(\tau)$
$\phi = 0$
$|0\rangle$



(a†)^n / √n! |0>
φ(t, X)
X(τ), T(τ)
t = 1/a sinh aτ
z = 1/a cosh aτ
|0>




S/E


t
x