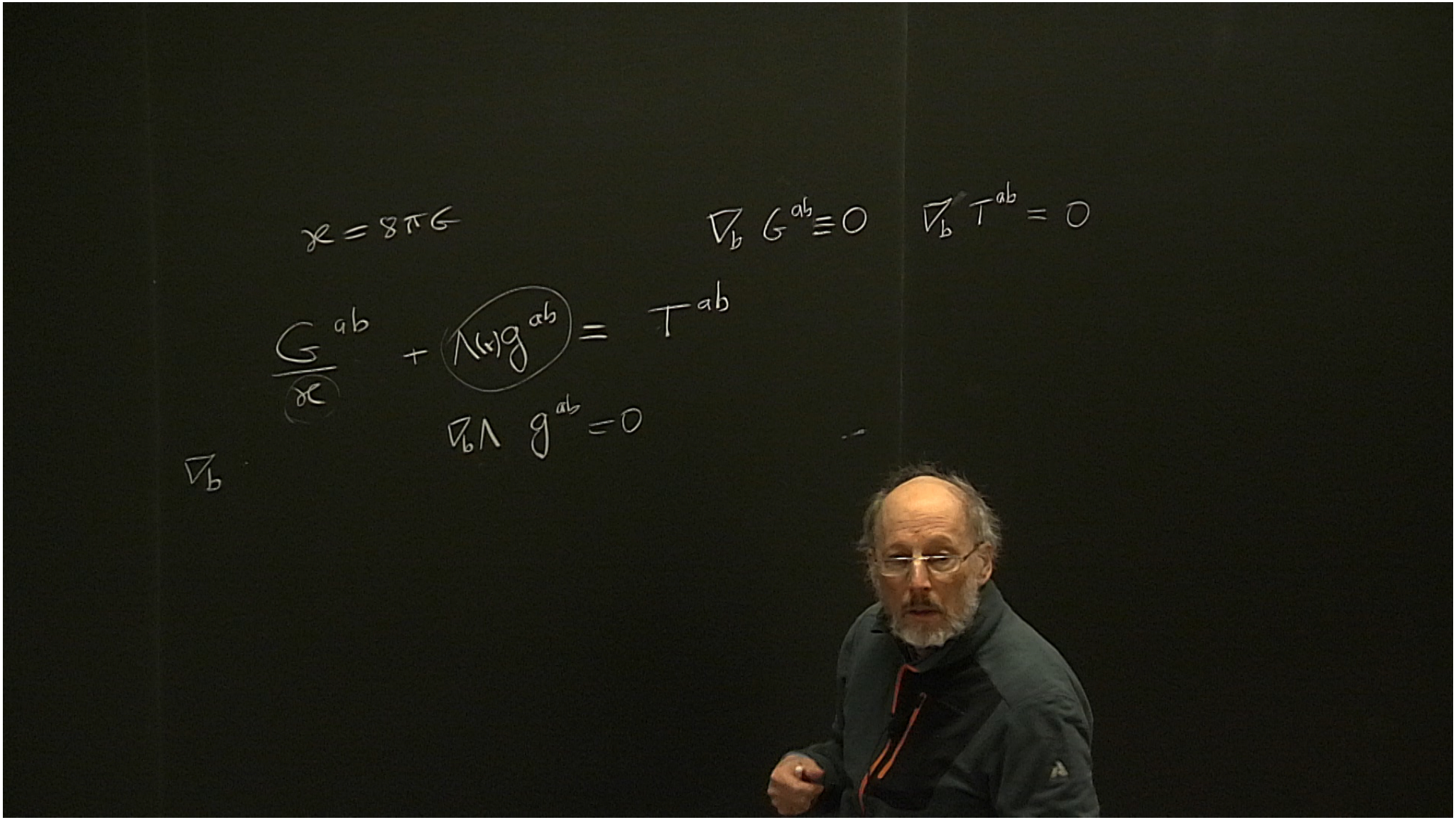
Title: Supplementary considerations on Everpresent Lambda

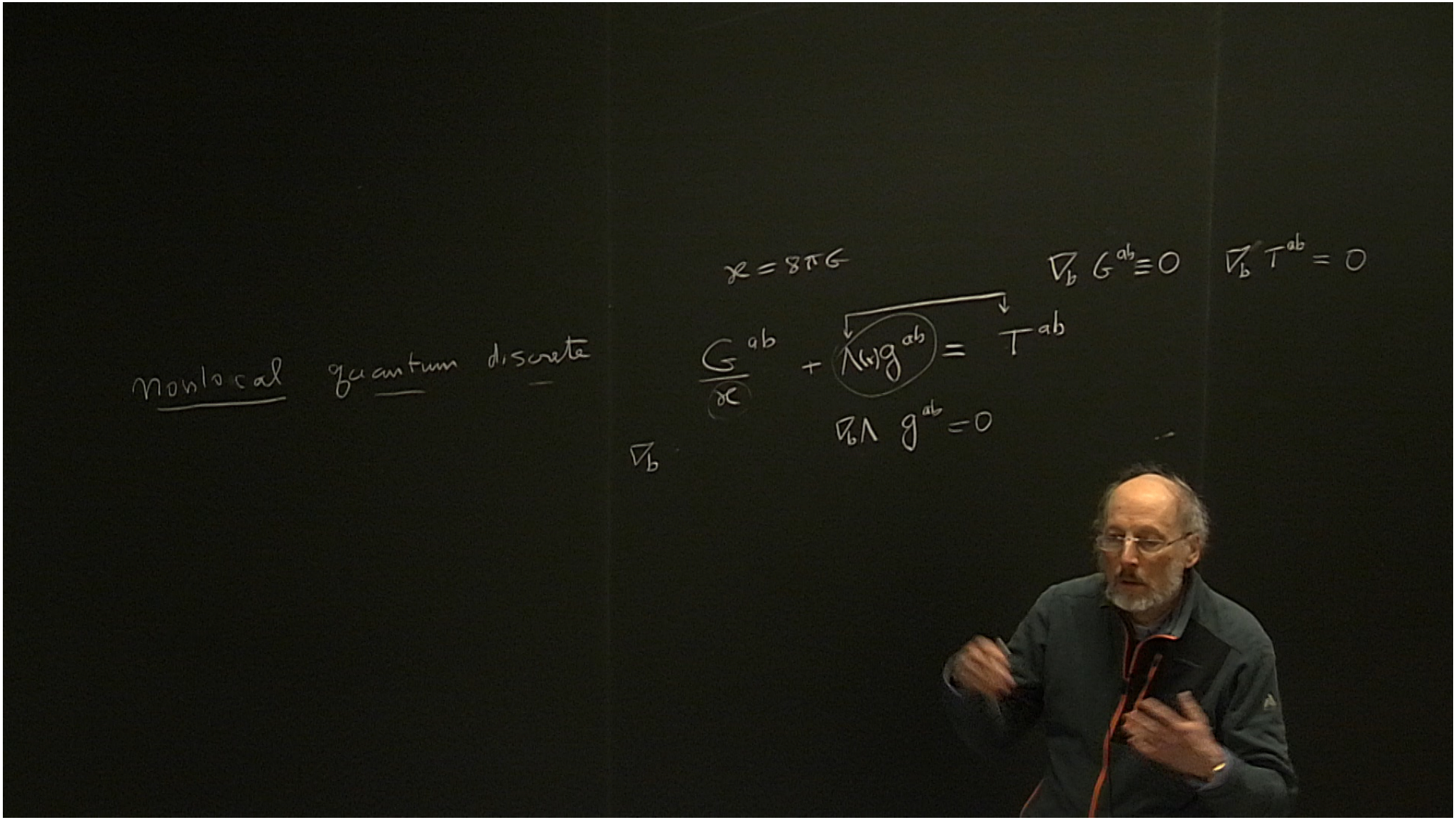
Speakers: Rafael Sorkin

Collection: Everpresent Lambda: Theory Meets Observations

Date: November 12, 2019 - 3:45 PM

URL: http://pirsa.org/19110069


$\varkappa = 8\pi G$
$\nabla_b G^{ab} \equiv 0$
$\nabla_b T^{ab} = 0$
$\frac{G^{ab}}{\varkappa} + \Lambda(x) g^{ab} = T^{ab}$
$\nabla_b \Lambda\, g^{ab} = 0$
∇_b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Nonlocal quantum discrete
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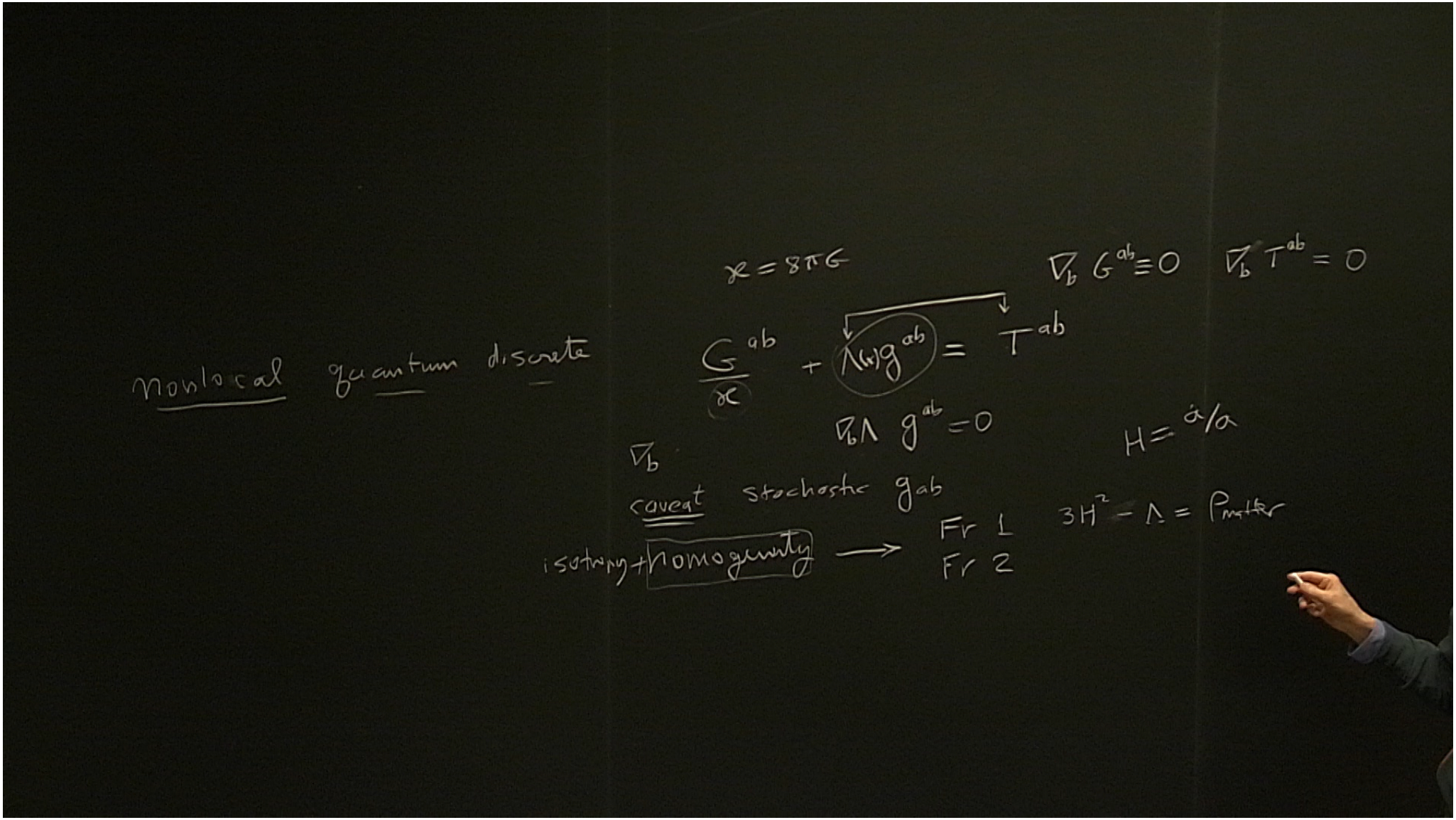
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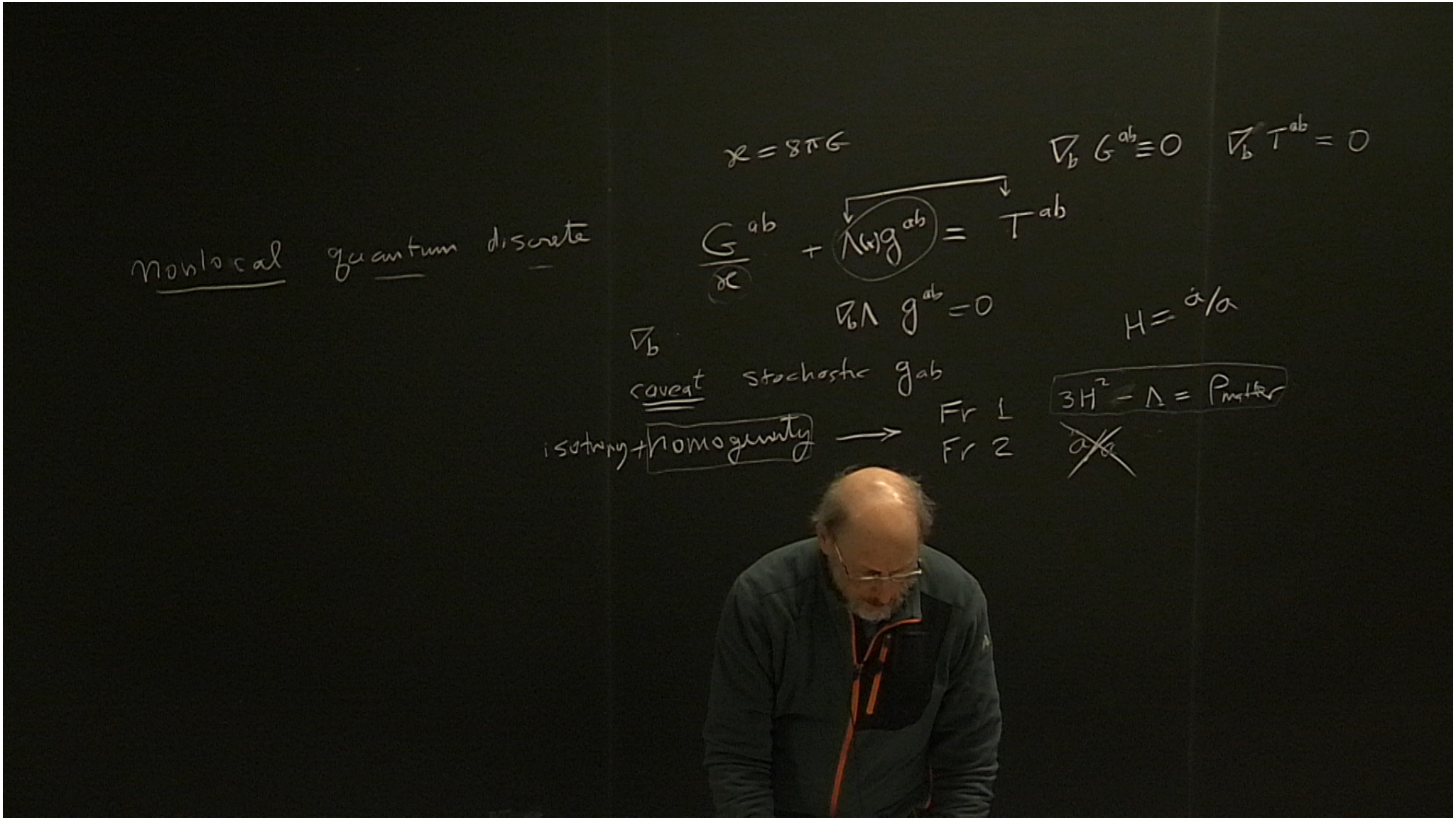
$H = \dot{a}/a$
caveat stochastic g_{ab}
isotropy + homogeneity $\longrightarrow$ Fr 1 $3H^2 - \Lambda = \rho_{matter}$ Fr 2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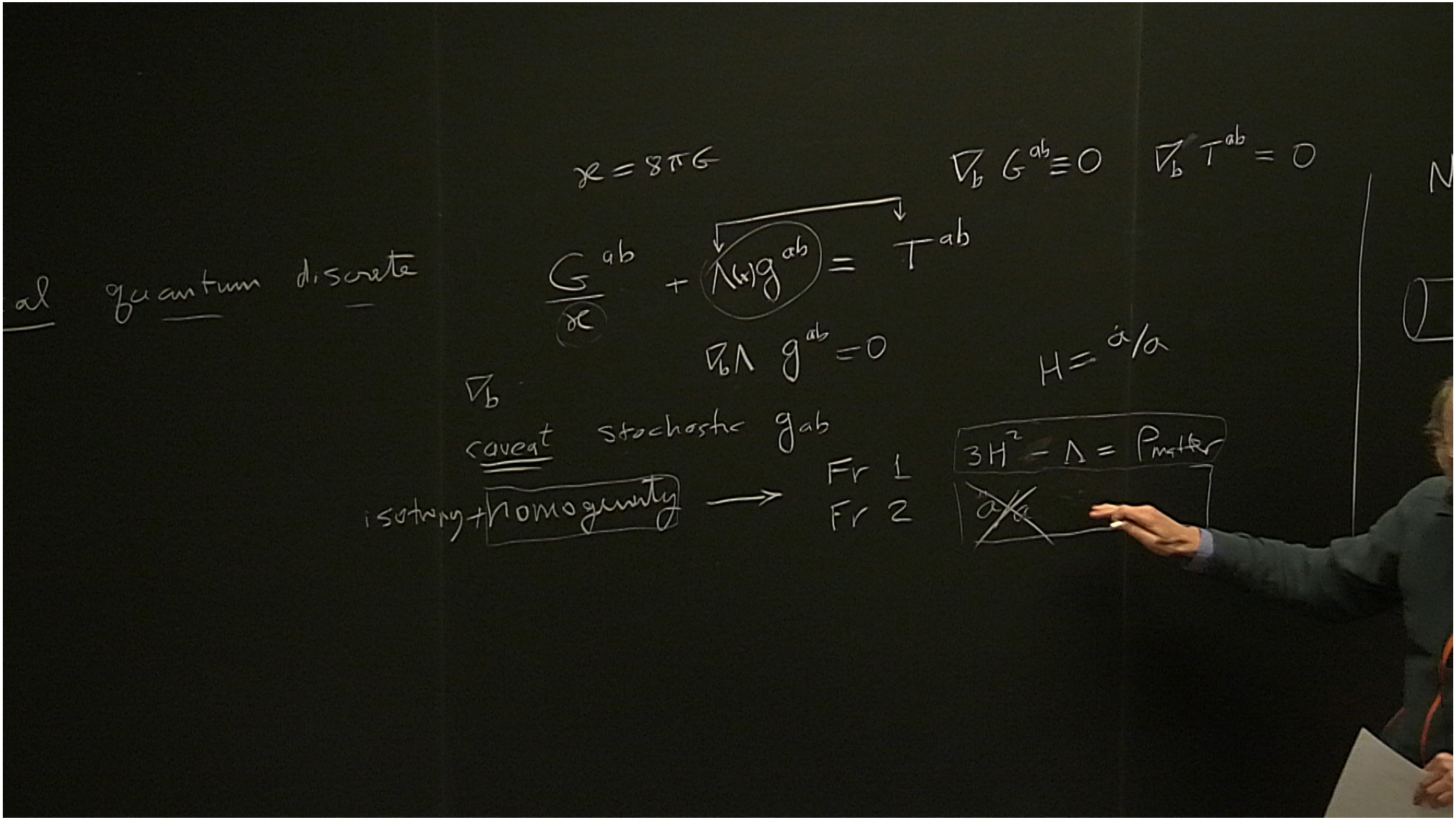
$= 0$

No big extra dimensions $\rightarrow$ $\delta\Lambda$ small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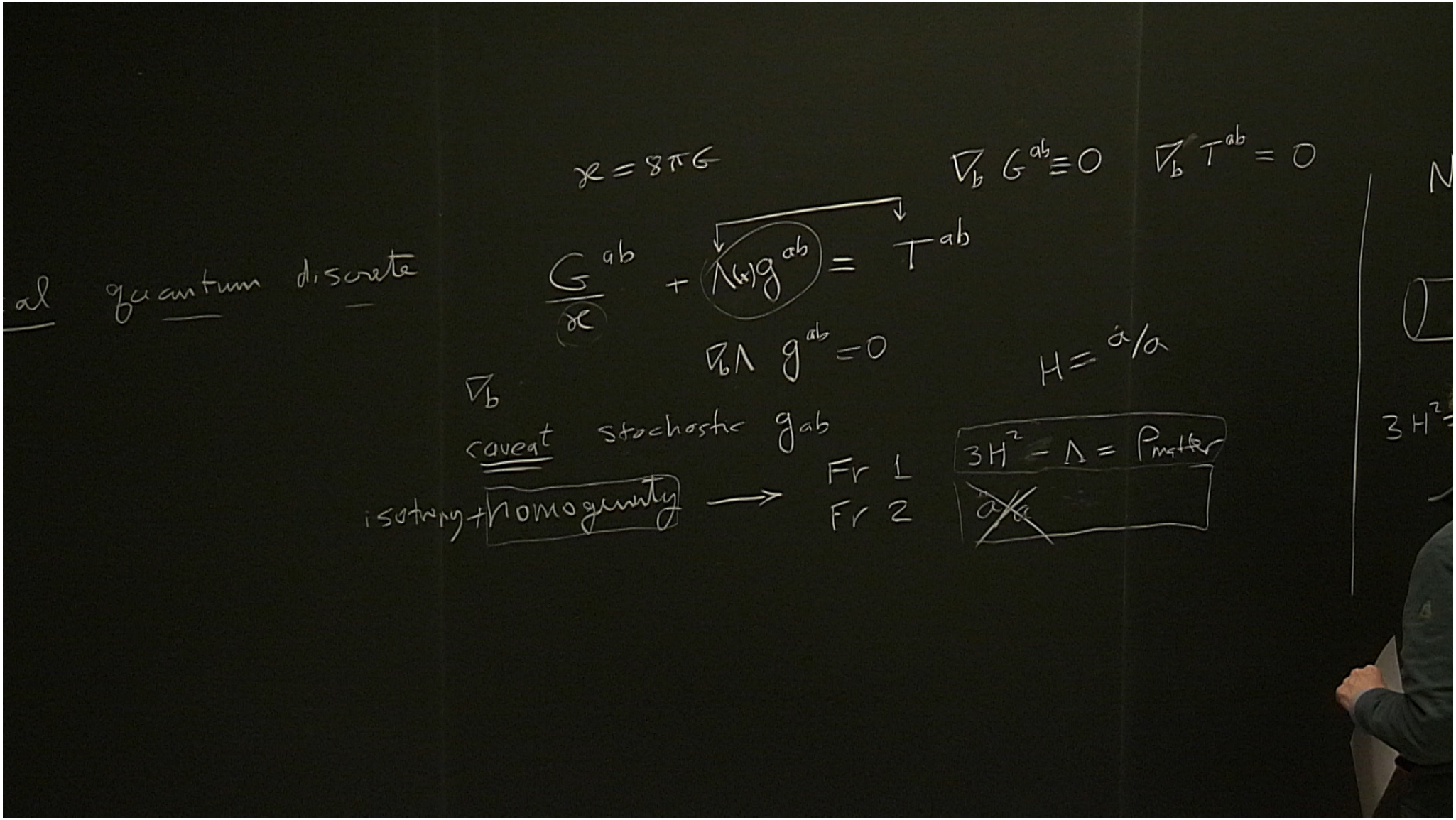
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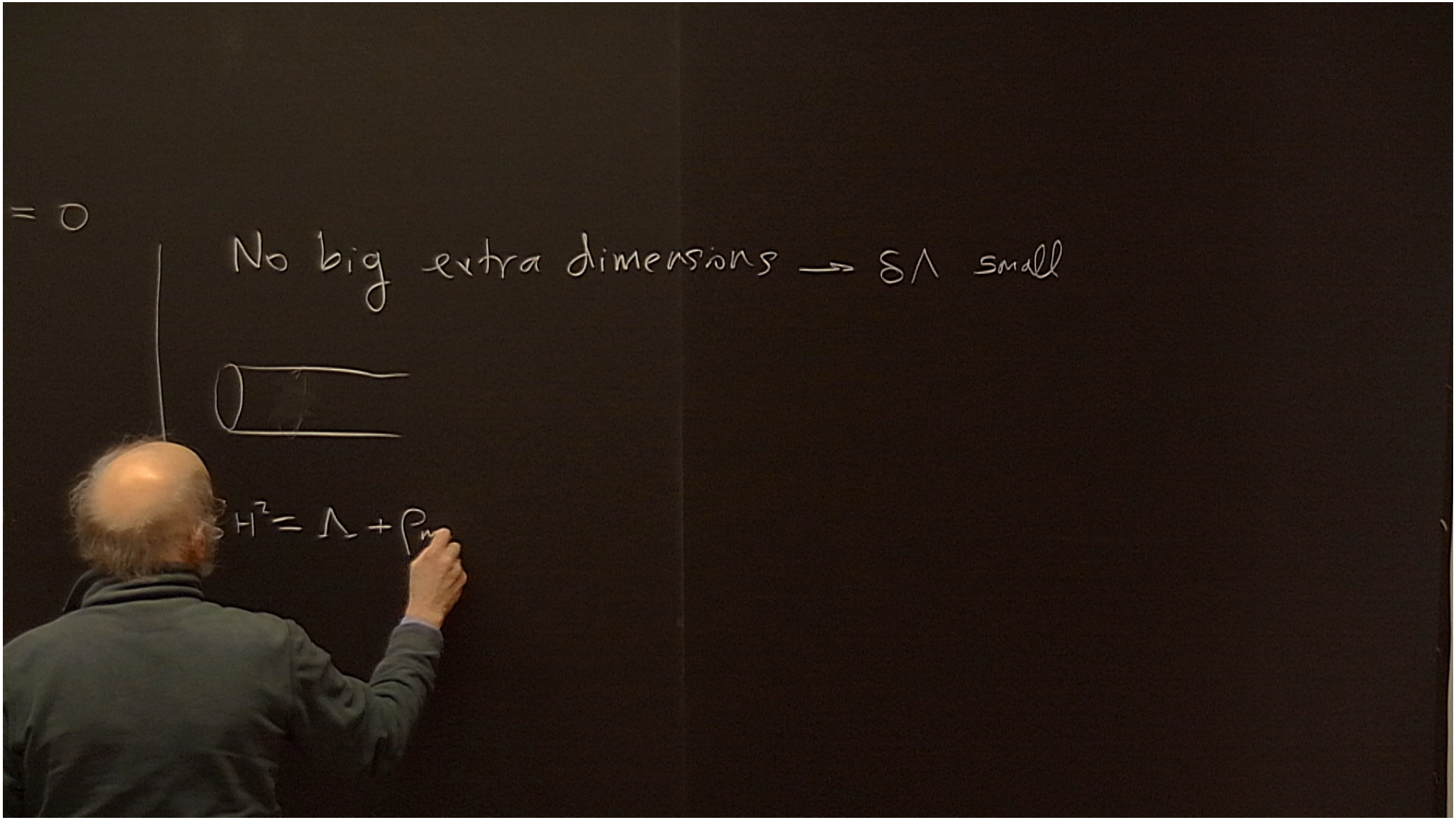
Fr 1
Fr 2
$3H^2 - \Lambda = \rho_{matter}$
$\dot{a}/a$
N
$3H^2$


= 0
No big extra dimensions → δΛ small
$H^2 = \Lambda + \rho_m$

$= 0$

No big extra dimensions $\rightarrow \delta\Lambda$ small

$3H^2 = \Lambda + \rho_{matt}$

$H = L^{-1}$ nonlocal quantum discrete

$\varkappa = 8\pi G$

$$\frac{G^{ab}}{\varkappa} + \Lambda(x) g^{ab} = T$$

$\nabla_b \Lambda\, g^{ab} = 0$

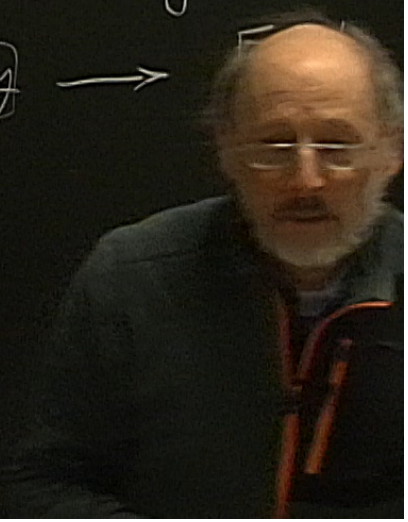
$\int R\,dV \qquad \int \Lambda\,dV$

$\Lambda \sim \frac{1}{\sqrt{V}} \sim \frac{1}{L^{D/2}}$ ∇_b

caveat stochastic g_{ab}

$R \sim \frac{1}{L^2} L^D \qquad \Lambda V \sim \frac{1}{L^{D/2}} L^D$

isotropy + homogeneity $\longrightarrow$

$D < 4$ Λ dominates

$D > 4$ R_{ab} //