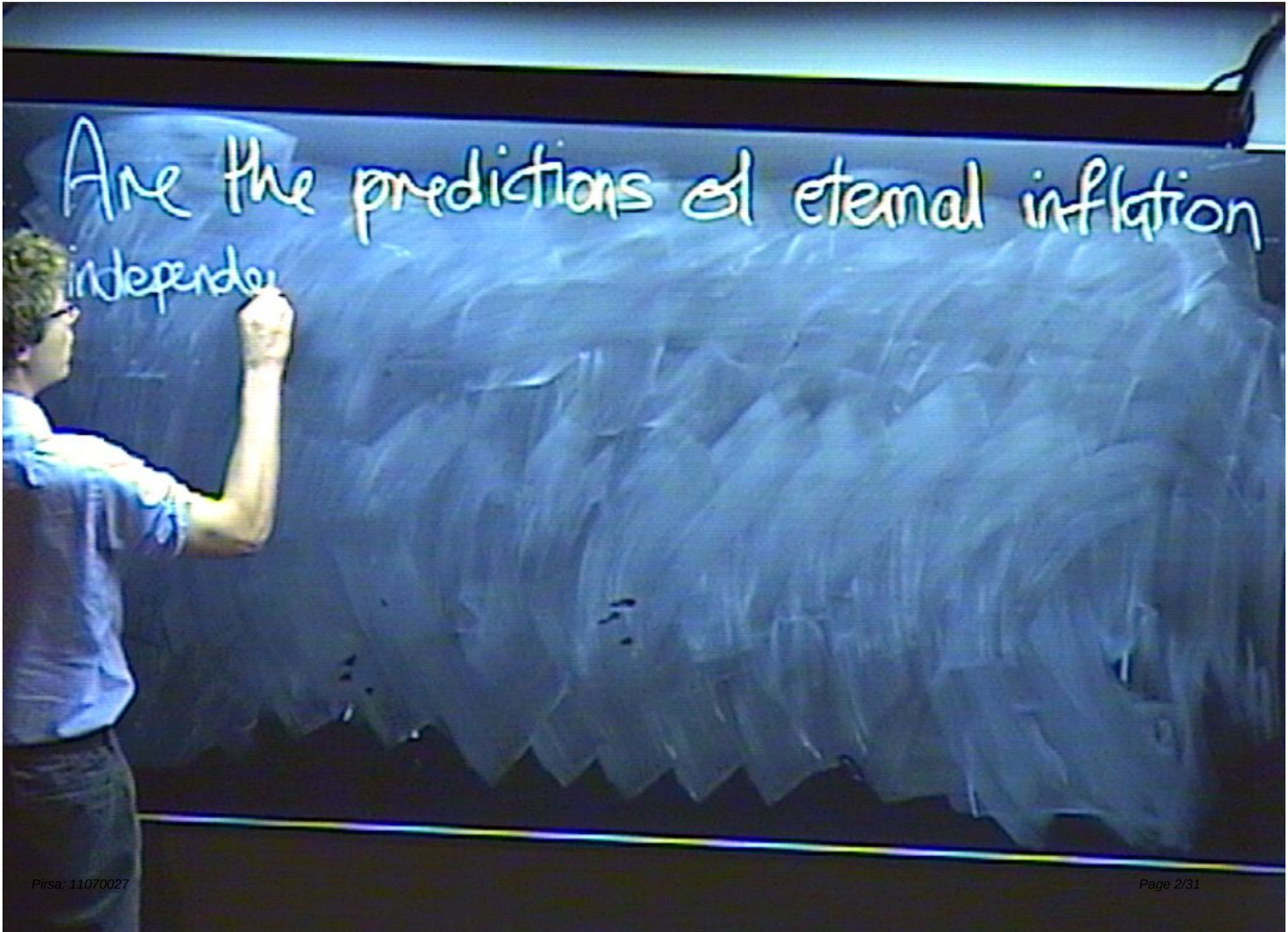
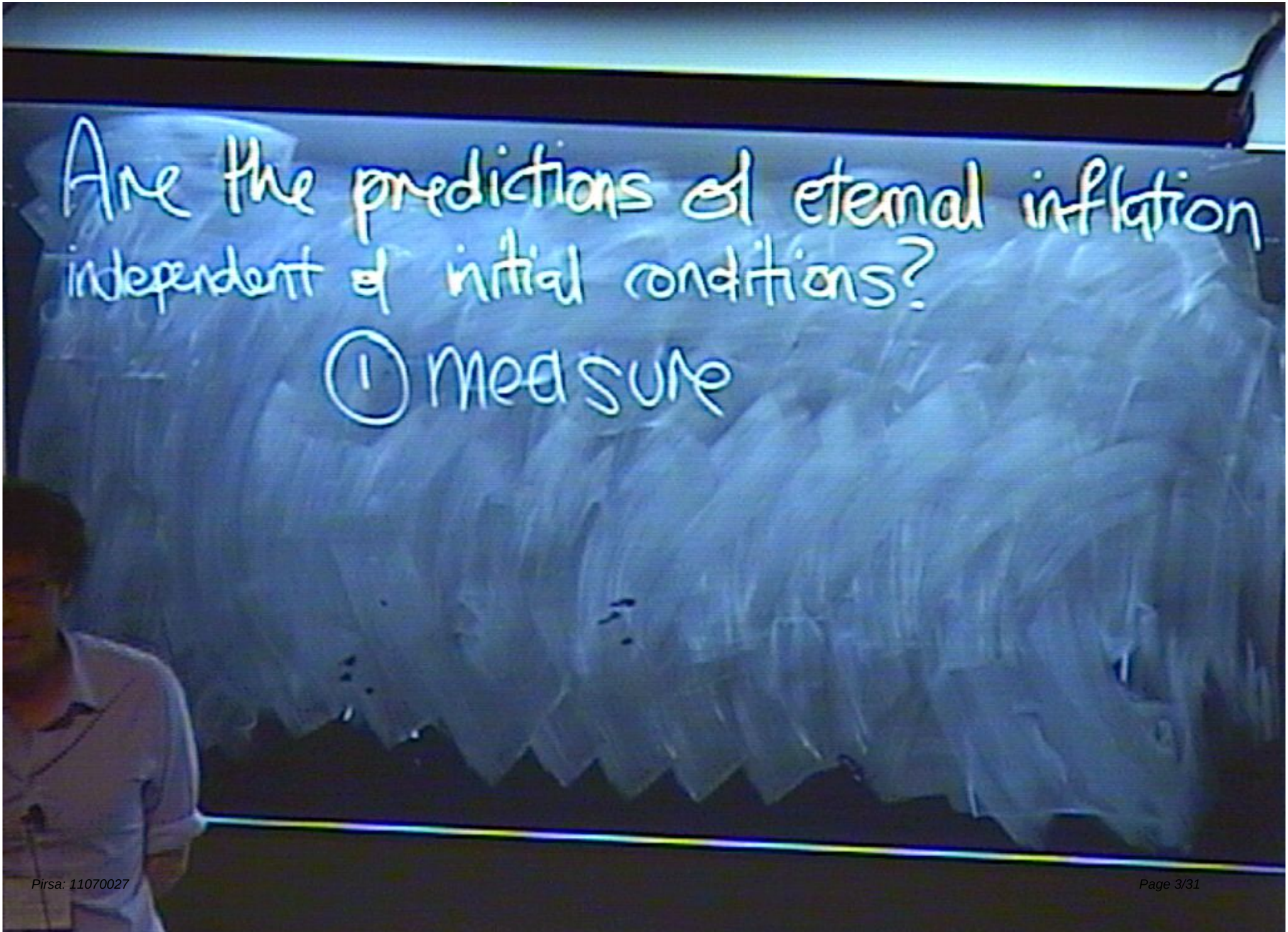
Title: Populating the Whole Landscape

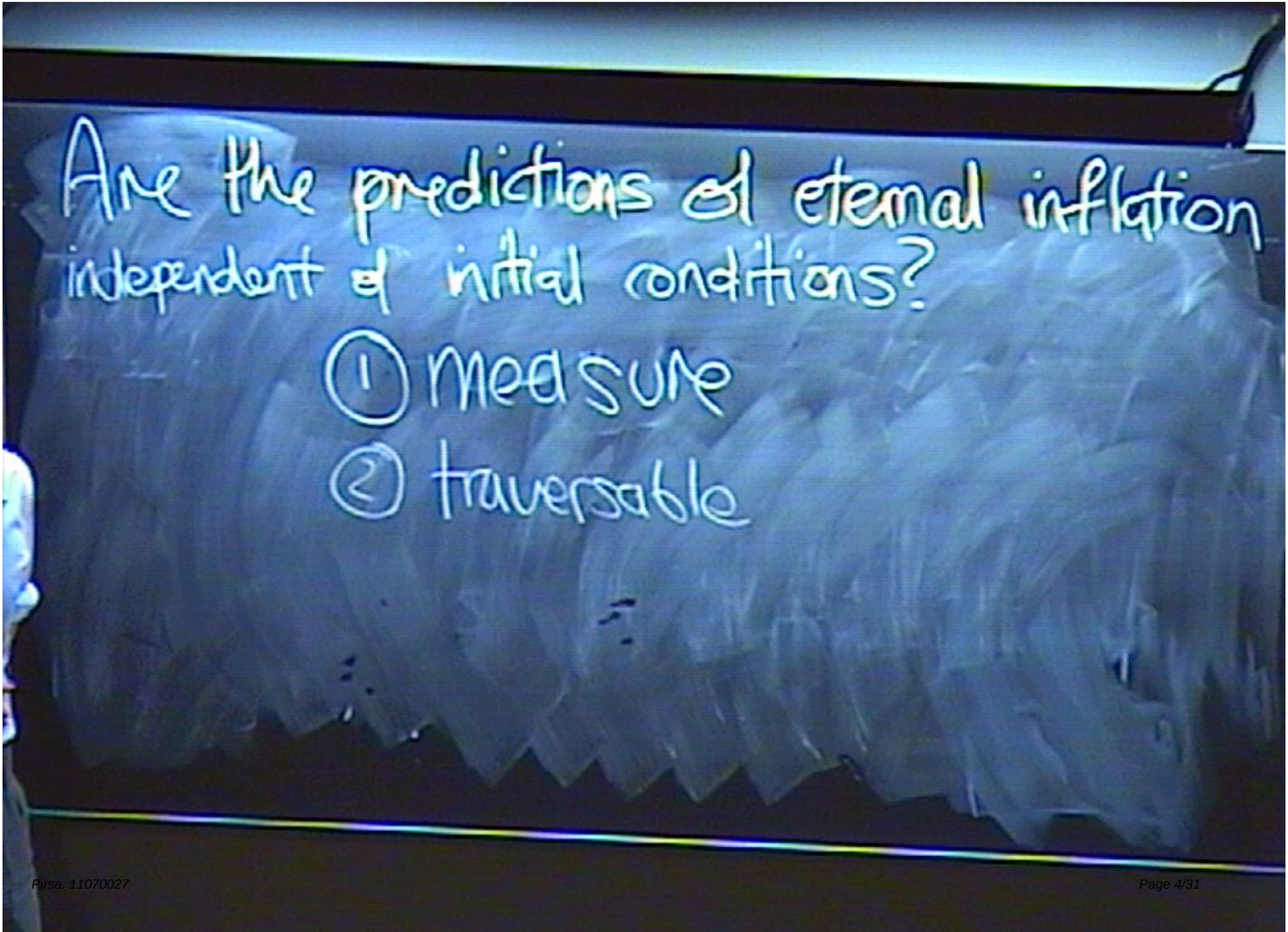
Date: Jul 13, 2011 05:30 PM

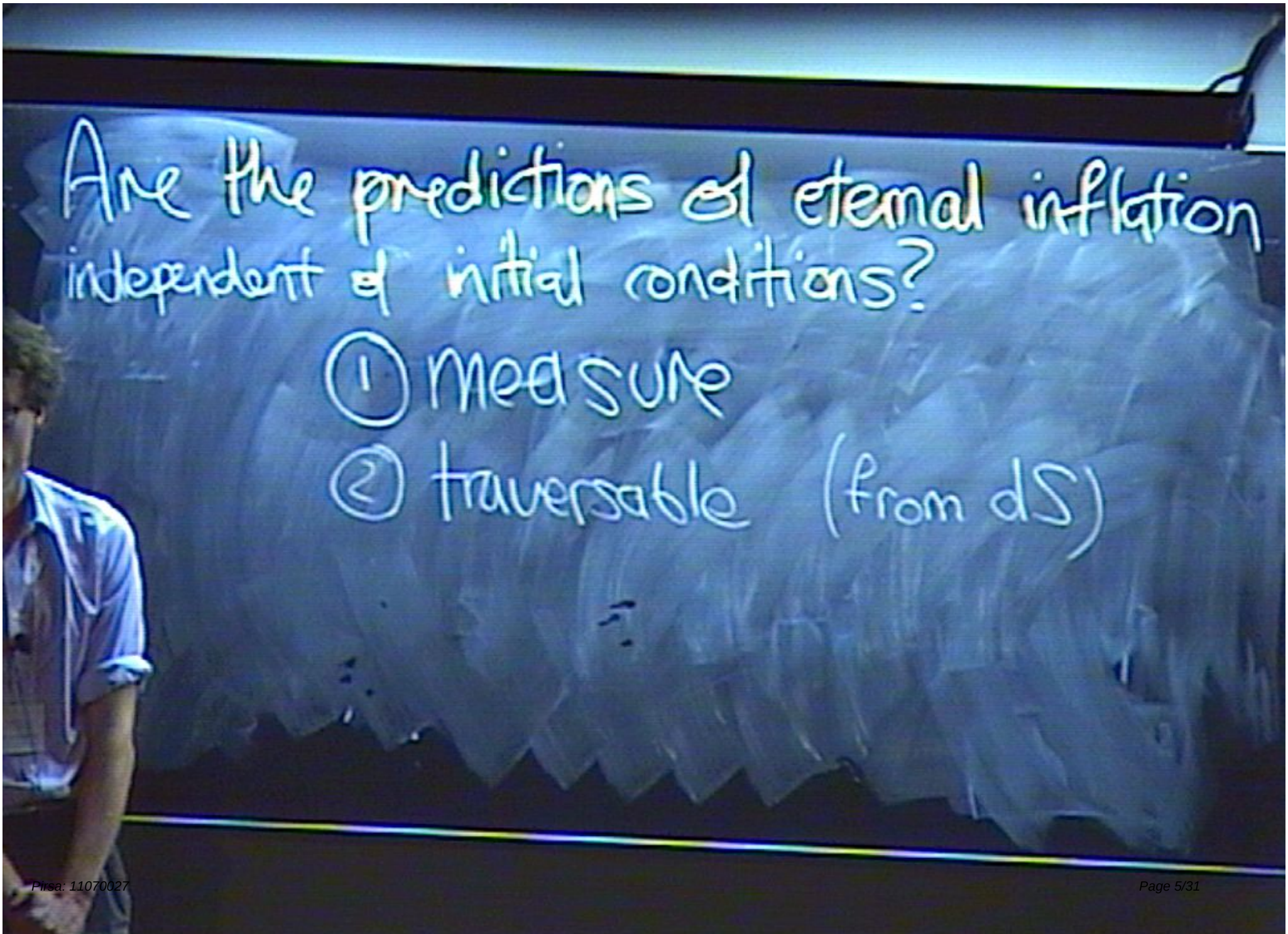
URL: http://pirsa.org/11070027

Abstract:


Are the predictions of eternal inflation
independe


Are the predictions of eternal inflation independent of initial conditions?
① measure


Are the predictions of eternal inflation independent of initial conditions?
① measure
② traversable


Are the predictions of eternal inflation independent of initial conditions?
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② traversable (from dS)

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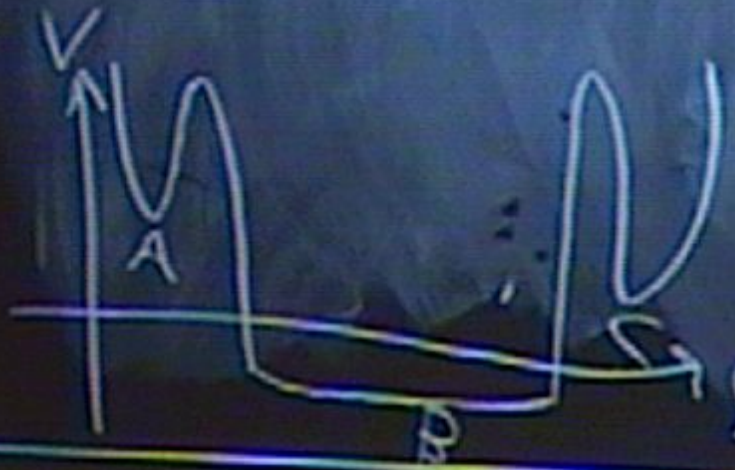

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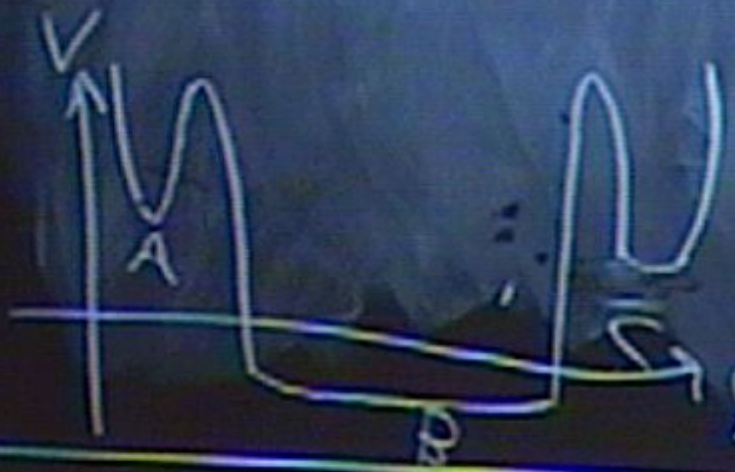

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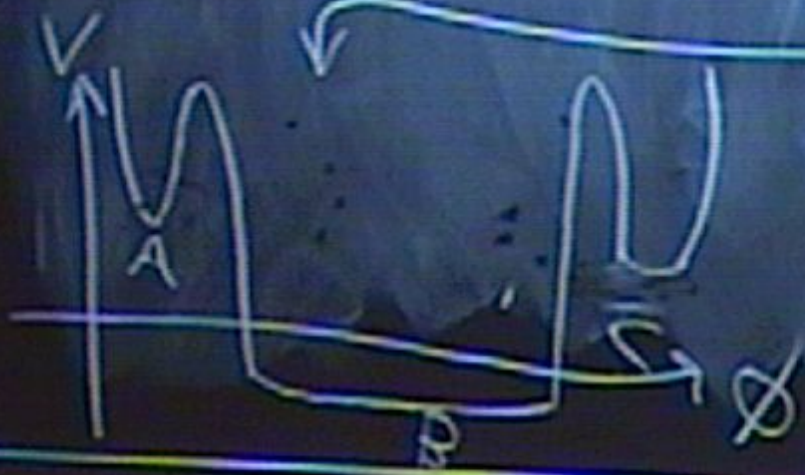

disconnected?

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① measure

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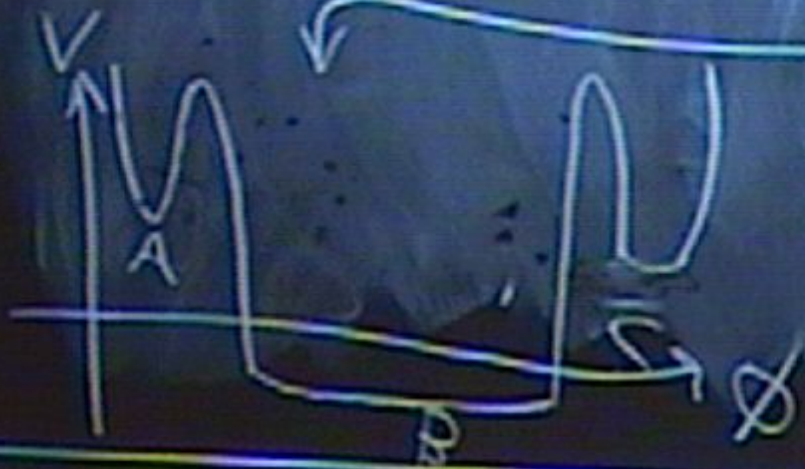

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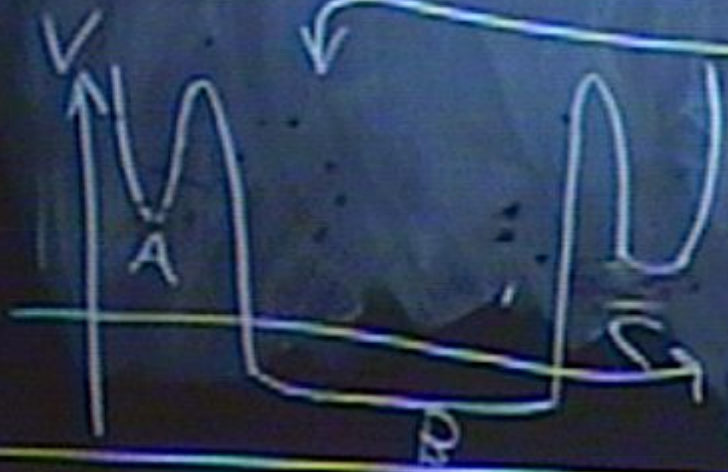
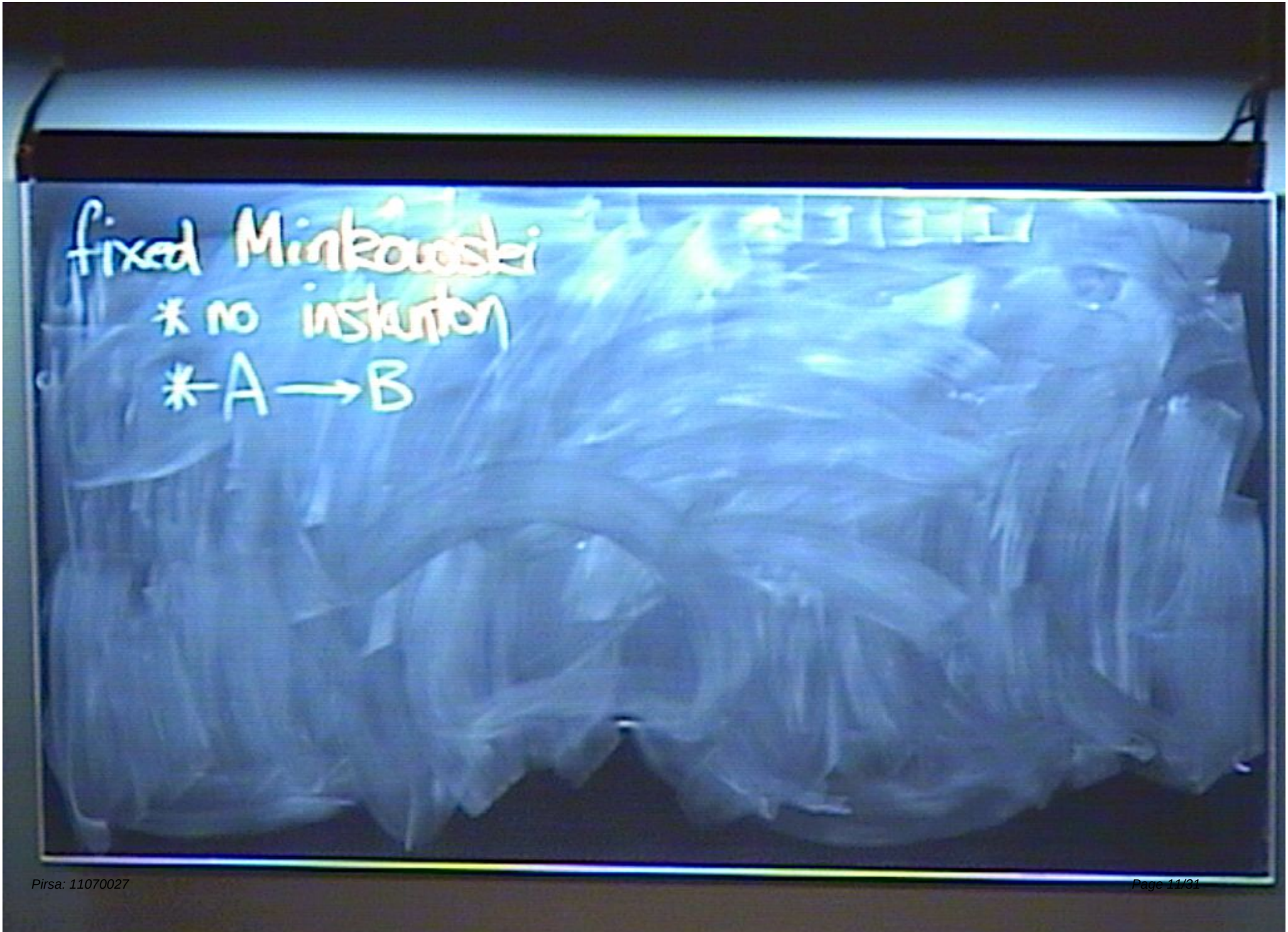
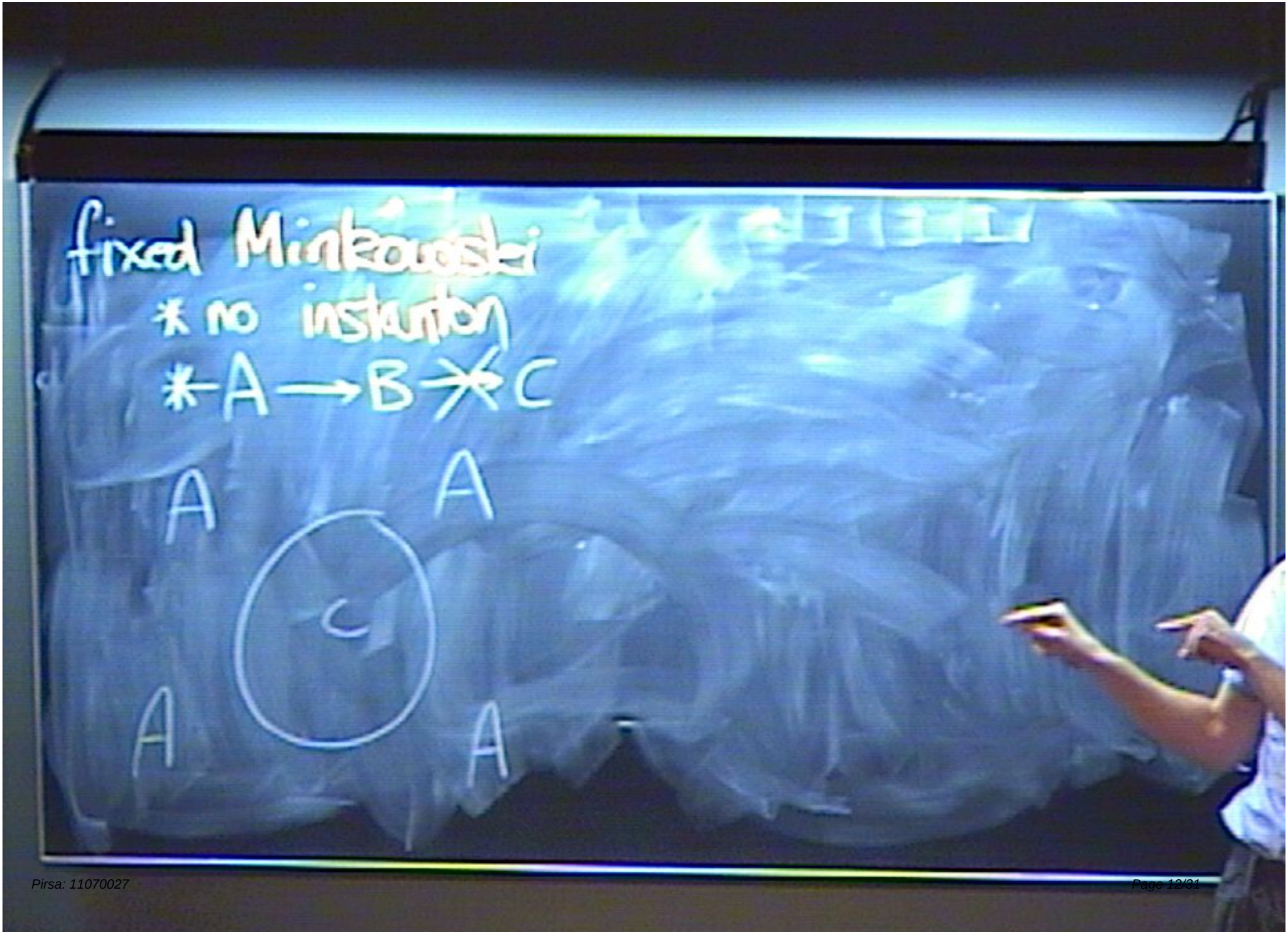
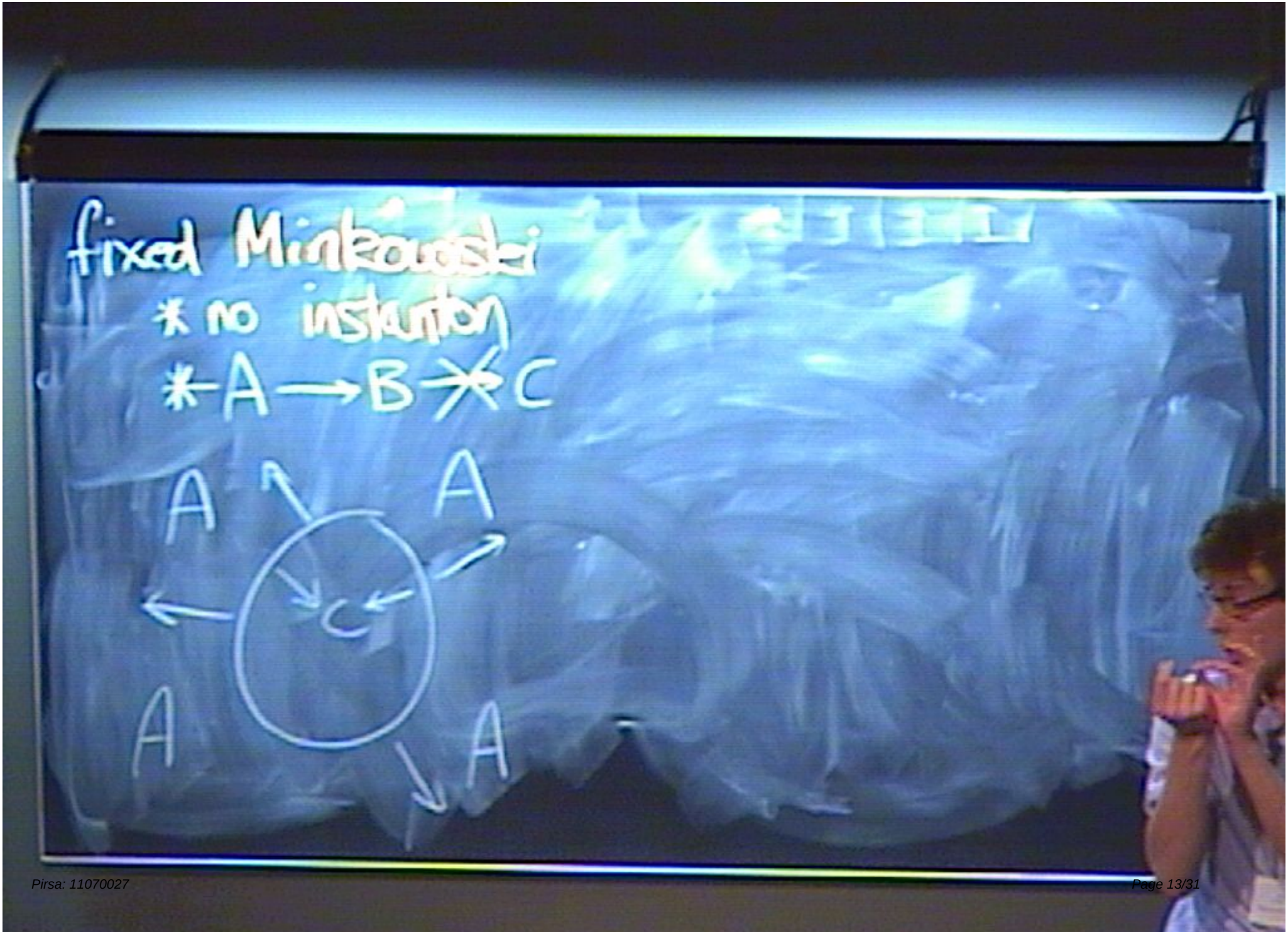


disconnected?


fixed Minkowski
* no instanton
* A → B


fixed Minkowski
* no instanton
*A → B ✳ C
A
A
A
A
C


fixed Minkowski
* no instanton
*A → B *C
A
A
A
A
C

fixed Minkowski

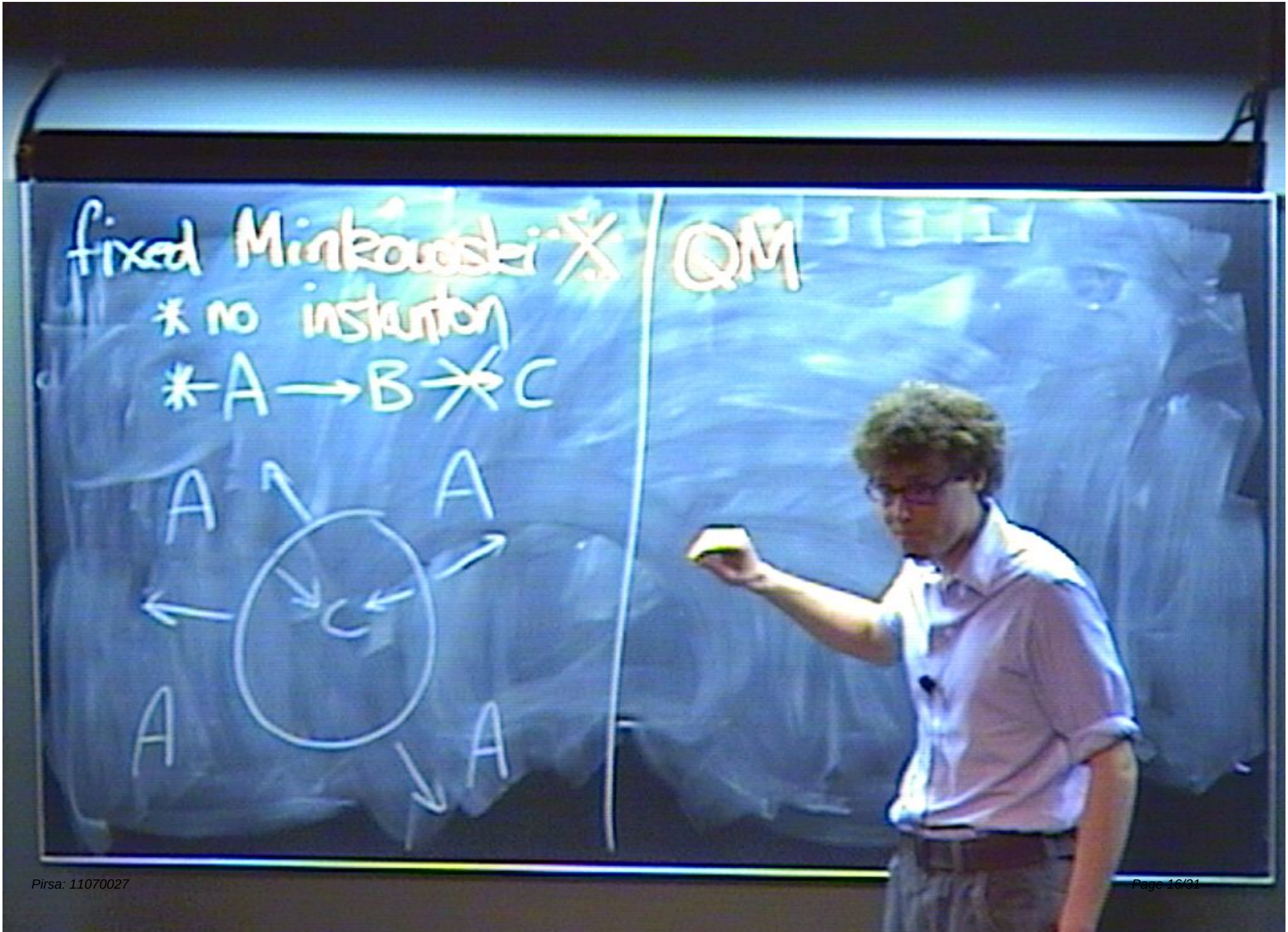
* no instanton

* A → B * C

fixed Minkowski X

* no instanton

* A → B * C


fixed Minkowski
QM
* no instanton
*A → B * C
A
A
A
A

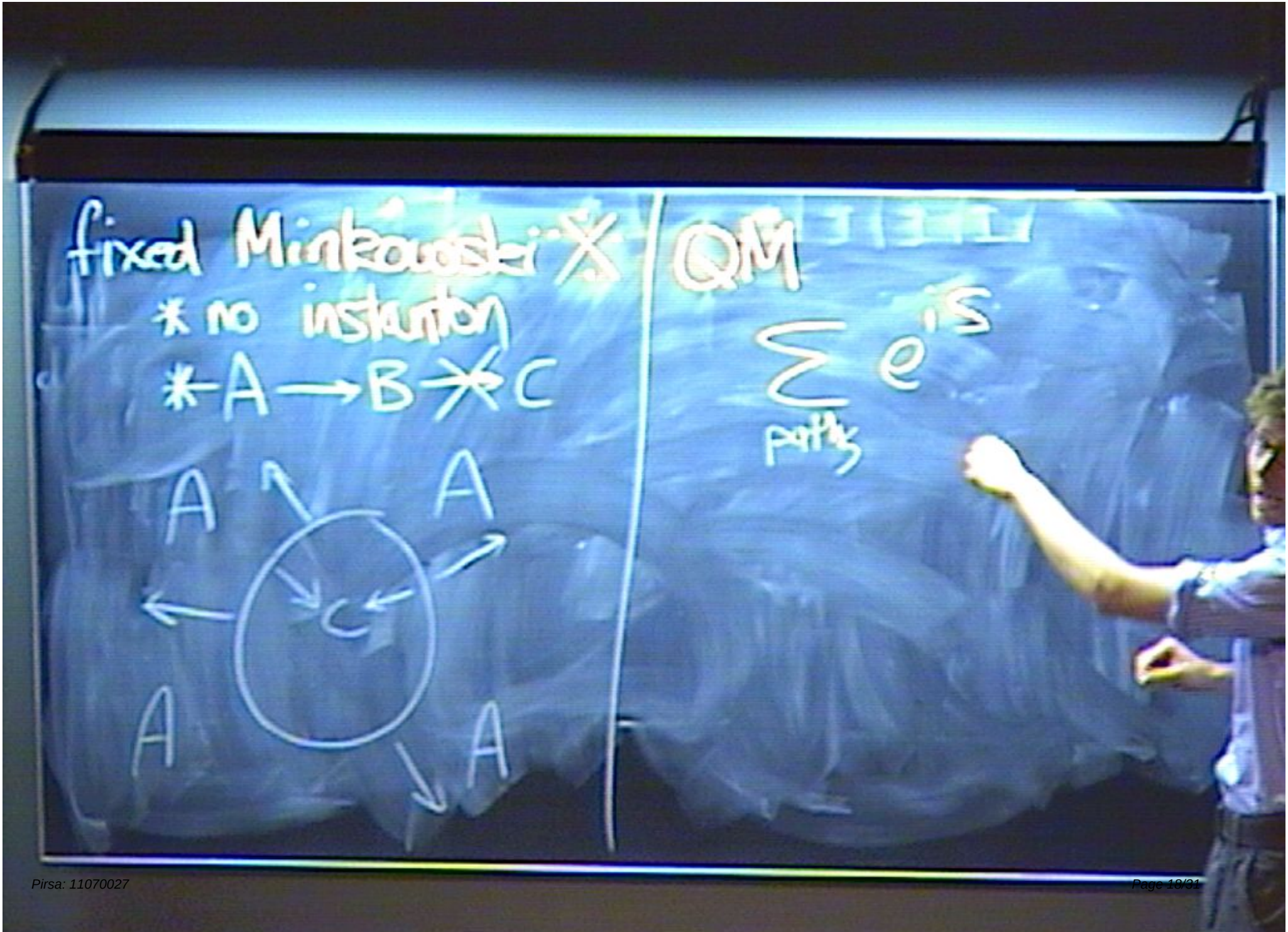
fixed Minkowski ✗

* no instanton

* A → B * C

QM

$$\sum_{\text{paths}} e^{iS}$$


fixed Minkowski
* no instanton
*A → B *C
A
A
C
A
A
QM
$\sum_{\text{paths}} e^{iS}$

fixed Minkowski ✗

* no instanton

* A → B * C

QM

$\sum_{\text{paths}} e^{iS} \neq 0$

unless

C.D.I.

fixed Minkowski ✗

* no instanton

* A → B ✗ C

QM

$$\sum_{\text{paths}} e^{iS} \neq 0$$

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unless

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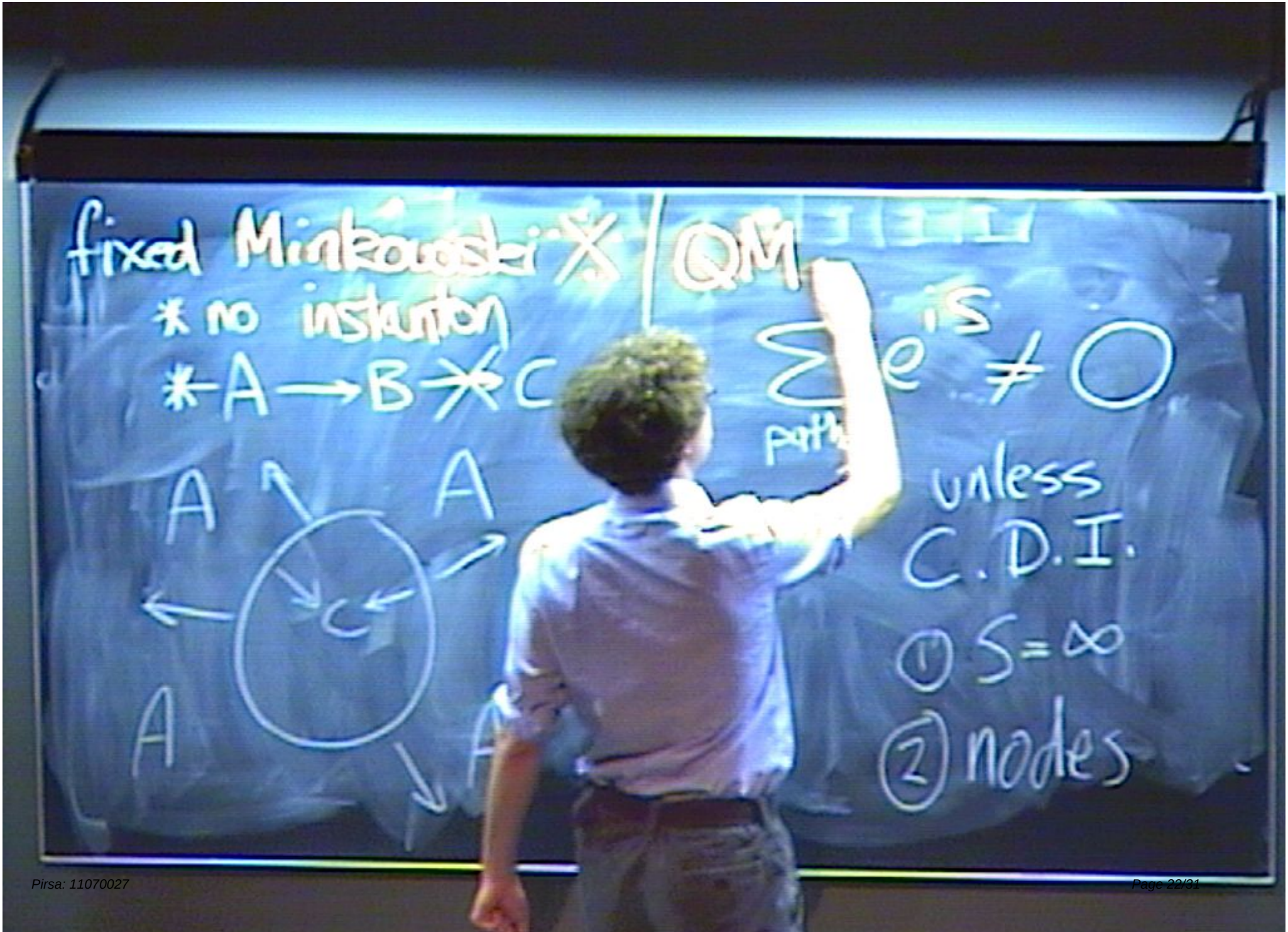
① $S = \infty$


fixed Minkowski
QM
* no instanton
*A → B *C
Σ e^iS ≠ 0
path
A
A
A
A
C
unless
C.D.I.
① S = ∞
② nodes

fixed Minkowski ✗

* no instanton

* A → B * C

QM ✓

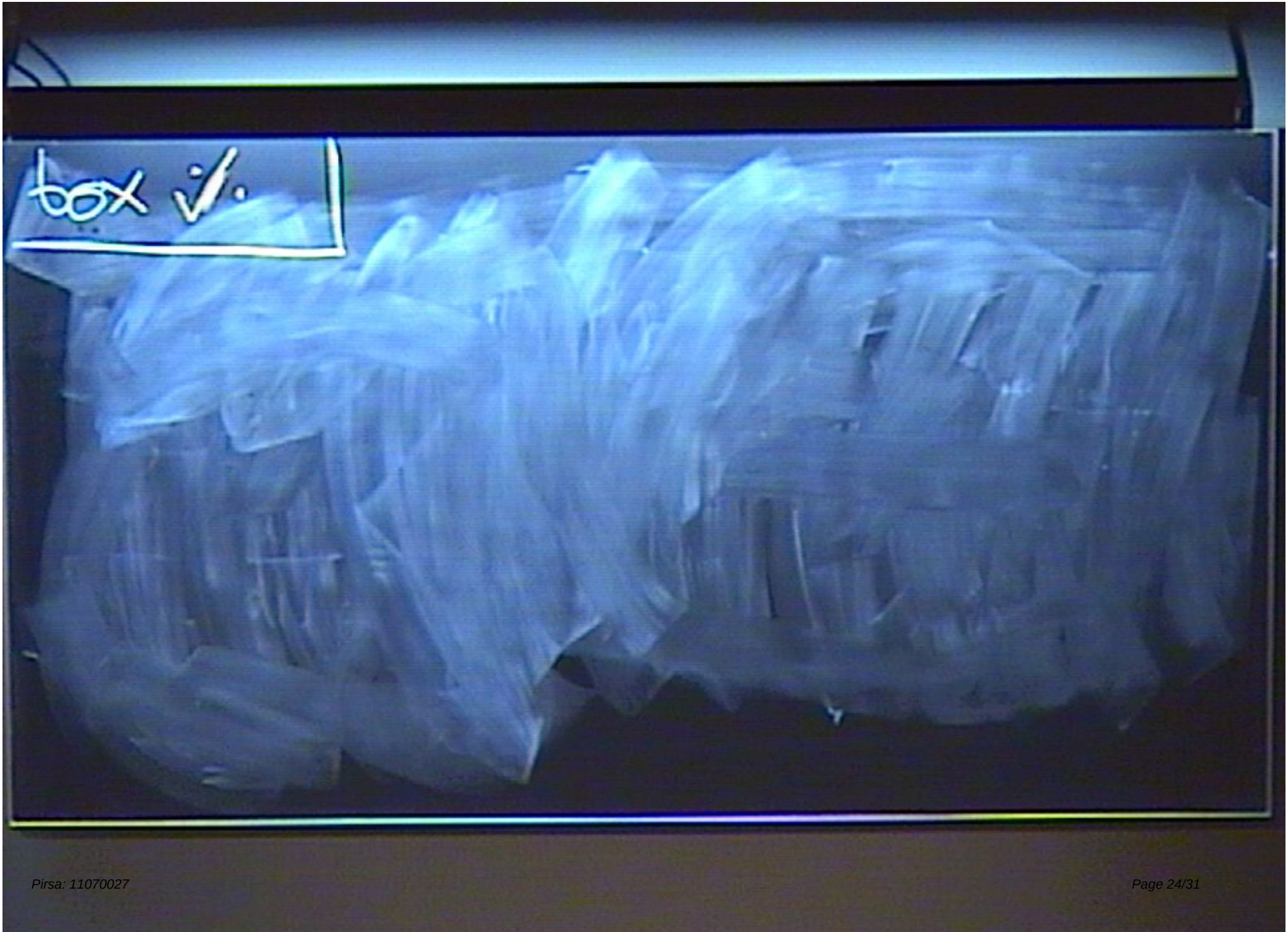
$$\sum_{\text{paths}} e^{iS} \neq 0$$

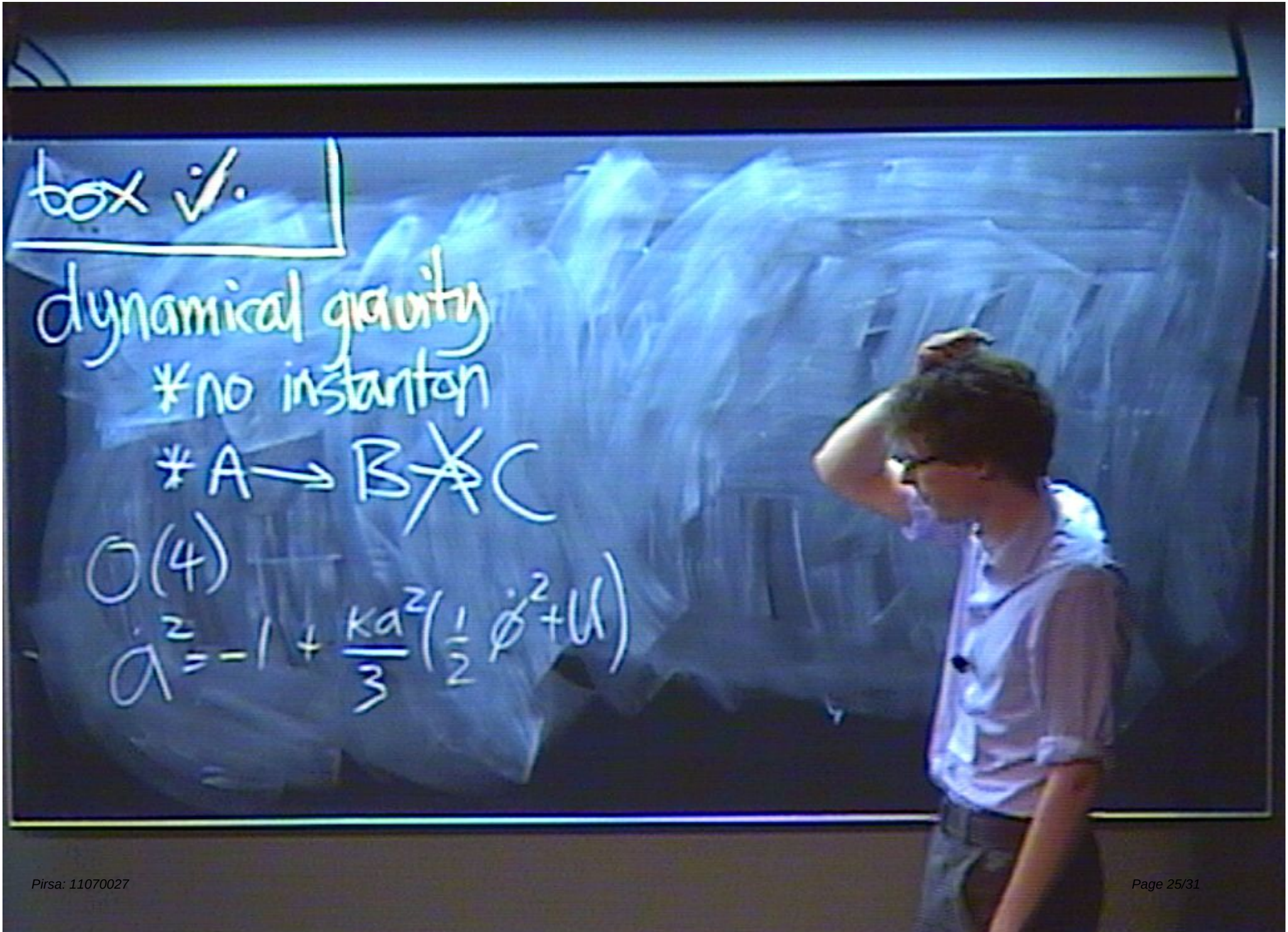
unless

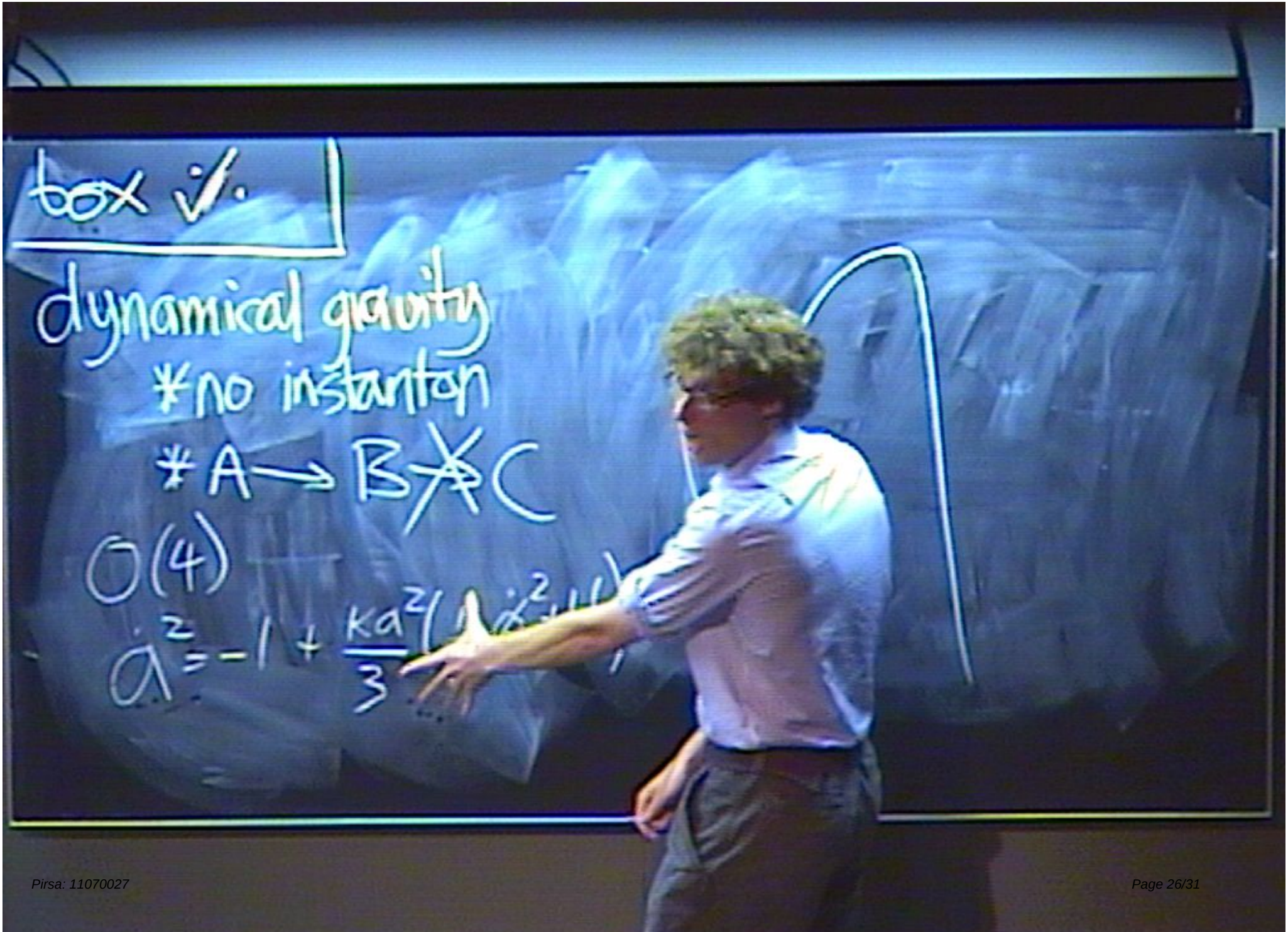
C.D.I.

① $S = \infty$

② nodes


box


box ✓.
dynamical gravity
*no instanton
*A → B ↛ C
O(4)
$\dot{a}^2 = -1 + \frac{Ka^2}{3}\left(\frac{1}{2}\dot{\phi}^2 + U\right)$


box ✓.
dynamical gravity
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O(4)

box ✓.

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O(4)

$$\dot{a}^2 = -1 + \frac{\kappa a^2}{3}\left(\frac{1}{2}\dot{\phi}^2 + U\right)$$

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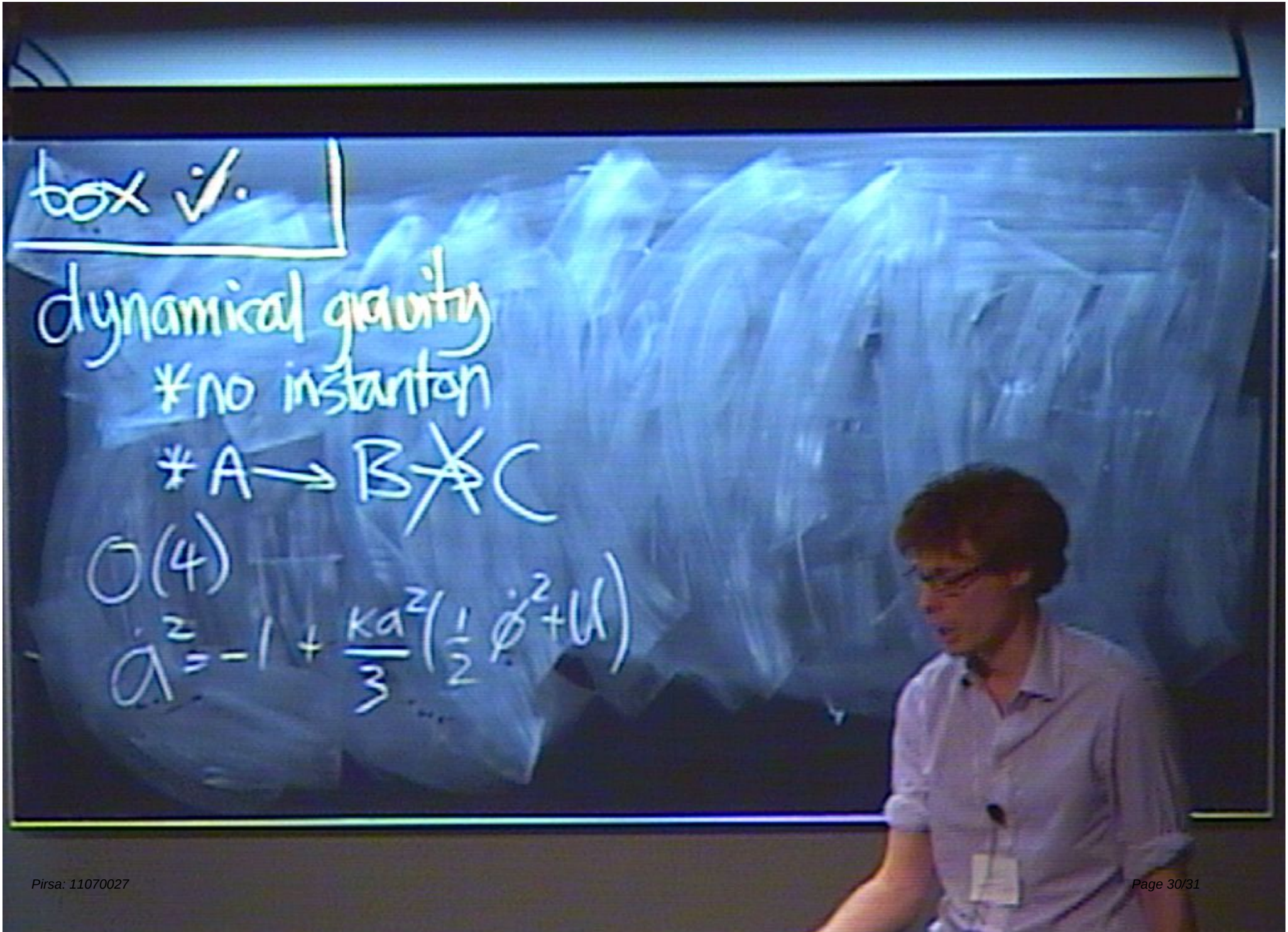
box ✓.
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