

Extreme Universe

The 15th COLLOQUIUM

April 13th (Thu.) ONLINE

TALK 22:00 - 23:00 (JST)

April 13th (Thu.) 9:00 - 10:00 am (EDT)

April 13th (Thu.) 13:00 - 14:00 am (GMT)

ONLINE COFFEE TIME

23:00 - 24:00 (JST)

Registration required (click [HERE](#))

Extreme Universe, JAPAN



Speaker

Prof. Andrew Strominger

Harvard University

Title **Cosmic ER=EPR**

Abstract

In the dS/CFT correspondence, bulk states on global spacelike slices of de Sitter space are dual to (in general) entangled states in the tensor product of the dual CFT Hilbert space with itself. We show, using a quasinormal mode basis, that the Euclidean vacuum (for free scalars in a certain mass range) is a thermofield double state in the dual CFT description, and that the global de Sitter geometry emerges from quantum entanglement between two copies of the CFT. Tracing over one copy of the CFT produces a mixed thermal state describing a single static causal diamond.

Collaboration

2023

