Quantizing speeds with the cosmological constant

Florian Girelli
fgirelli@perimeterinstitute.ca

Etera R. Livine
elivine@perimeterinstitute.ca

Perimeter Institute, 35 King Street North, Waterloo, Ontario, Canada N2J 2W9

abstract Considering the Barrett-Crane spin foam model for quantum gravity with (positive) cosmological constant, we show that speeds must be quantized and we investigate the physical implications of this effect such as the emergence of an effective deformed Poincaré symmetry.