

Cosmological Sector of the Barrett-Crane GFT Model

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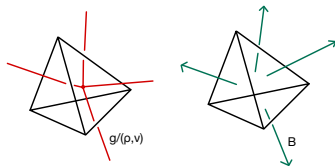


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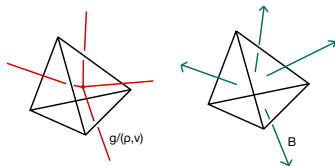


Figure: Geometric interpretation of GFT quanta

$$A = \sqrt{\rho^2 + 1 - \nu^2} = \sqrt{B \cdot B}$$

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- Other GFT models viable \Rightarrow 'universal' behavior?

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$$\varphi(g_v) \longrightarrow \varphi(g_v; X)$$

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$$\varphi(g_1, g_2, g_3, g_4; X) = \varphi(g_1 u_1, g_2 u_2, g_3 u_3, g_4 u_4; X), \quad \forall u_i \in \mathrm{SU}(2)_X$$

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Domain of condensate wavefunction is diffeomorphic to minisuperspace of homogeneous 3-geometries

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Conjecture: Microscopic details, such as simplicity constraints, do not affect the coarse grained relational evolution

[Dittrich 2021]

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