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Coherent States and Quantum Geometry Phenomenology SETH MAJOR, Hamilton College — The combinatorics of quantum geometry can raise the effective scale of the spatial geometry granularity predicted loop quantum gravity. However the sharply peaked properties of states built from SU(2) coherent states challenge the idea that such a combinatorial lever arm might lift the scale of spatial discreteness to an observationally accessible scale. For instance, the Livine-Speziale semi-coherent states exhibit no such lever arm. In this talk I discuss how an operational point of view suggests a different class of coherent states that are not built from states with microscopic classical geometry. These states are introduced, compared to previous coherent states, and the status of the combinatoric lever arm is discussed.

Seth Major
Hamilton College

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