Minimum Length Scenarios via Modified Uncertainty Principles and Operators JAEYEONG LEE, DOUGLAS SINGLETON, MICHAEL BISHOP, JOEY CONTRERAS, California State University, Fresno — The minimum length scale from theories of quantum gravity led to the modification of the Heisenberg uncertainty principle, the commutation relation, and the position operator. Previously, the generalized uncertainty principle and its modified commutation relations were the standard method to obtain a minimum length scale. However, we show that there are other modified uncertainty principle scenarios that does not necessarily require the modification of the structure of the uncertainty principle and the commutation relation.

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