

Positivity Bounds in Standard Model Effective Field Theory

Wednesday, 2 December 2020 11:00 (1 hour)

Dimension-8 Wilson coefficients in the Standard Model Effective Field Theory (SMEFT) are subject to the so-called “positivity bounds”. They are derived from the axiomatic principles of quantum field theory. In the parameter space spanned by Wilson coefficients, these bounds carve out various kinds of convex bodies and cones. As a result, several concepts and tools from convex geometry are useful for understanding these positive structures. I will discuss some recent studies on this topic, with a focus on the connection between the convex structure of the parameter space and the UV physics behind the SMEFT.

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