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Bootstrapping $U(N)$ S-matrices

Friday 11 October 2024 11:50 (20 minutes)

We analyze two-dimensional scattering matrices for particles transforming in the fundamental representation of the $U(N)$ global symmetry group, assuming no bound states. In particular, we use the S-matrix bootstrap formalism to construct the allowed space of S-matrices for such processes, which in turn need to be consistent with the usual conditions of unitarity, crossing and analyticity. Analogously to the $O(N)$ case studied in 1909.06495, we find that certain points at the boundary of this surface correspond to integrable models.

Which topic best fits your talk?

High Energy Physics and Cosmology

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