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Particle Physics at LPTHE

Mardi 23 Juillet 2019, 14 :00
LPTHE, library
Domaines : hep-ph

Titre : *Positivity bounds on vector boson scattering*

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Résumé : *Searching for deviations in quartic gauge boson couplings (QGCs) is one of the main goals of the electroweak program at the LHC. We consider positivity bounds adapted to the Standard Model EFT, and show that a set of positivity constraints on 18 anomalous QGC couplings can be derived, by requiring that the vector boson scattering amplitudes satisfy the fundamental principles of quantum field theory. We solve the positivity inequalities and find that the allowed parameter space is carved out by the intersection of pyramids, prisms, and cones. Altogether, the allowed parameter space is reduced to 2guidance to future BSM searches and could affect the limits on couplings by modifying the prior.*