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Review text:

One of the features which make the perturbation expansions useful (say, in quantum chromodynamics) lies in the possibility of analysis of their dependence on the so called infrared cut-off λ. In such a context a key technical trick lies in the various re-arrangements, say, of the scattering amplitude U defined as an infinite sum of the integrals of certain time- or energy-ordered products. The paper offers a new perspective of such an analysis, based on the explicitly constructed decompositions of all the relevant contributions into the so called irreducible factors. The main result is the observation and proposal that the current use of the energy ordering (characterized, basically, by the explicit use of the nested commutators) can be replaced by the direct use of the conceptually simpler irreducible time-ordered expressions. Main attention is paid to the underlying combinatorics and identities, with applications deferred to "a future study".