Karlsruher Institut für Technologie

Thesis

by

Tigran Saidnia

Emission kernel of parton shower

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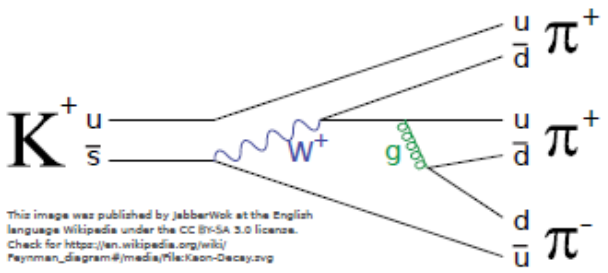

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Karlsruhe institute for Technology (KIT)

Institute of theoretical physics

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Dr. Simon Plätzle

Supervisor: Emma Simpson

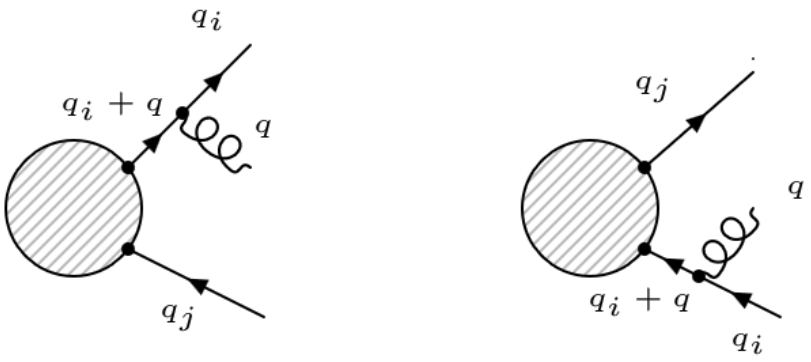
statement of originality

I hereby confirm that I have written the accompanying thesis by myself, without contributions from any sources other than those cited in the text and acknowledgements. This applies also to all graphics, drawings, maps and images included in the thesis.

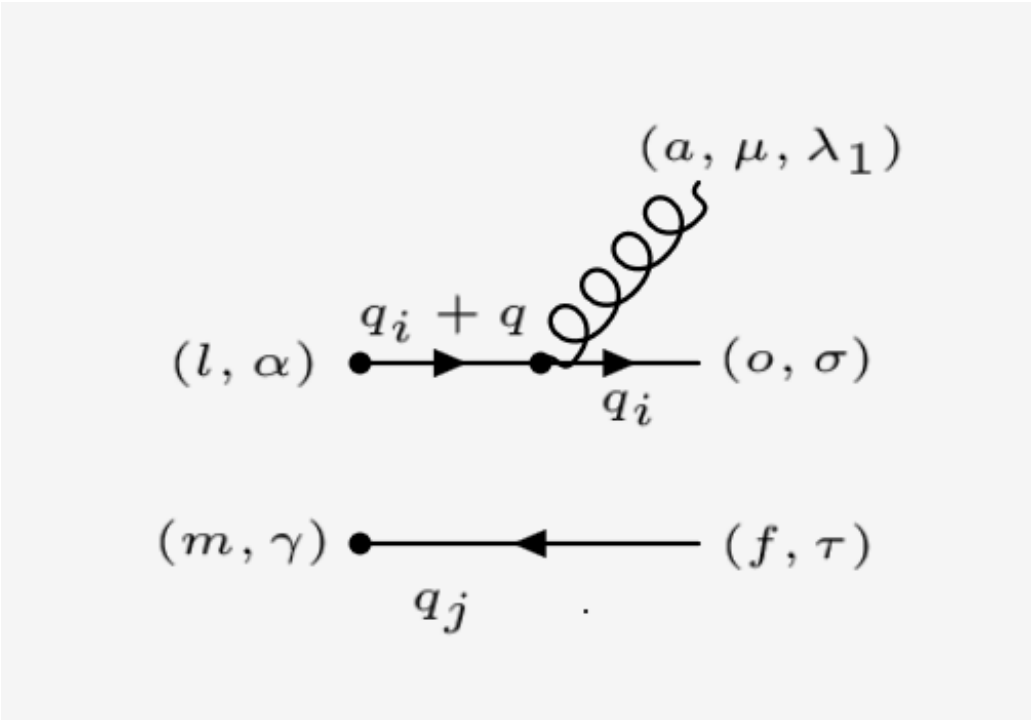
Karlsruhe, 2. Januar 2019

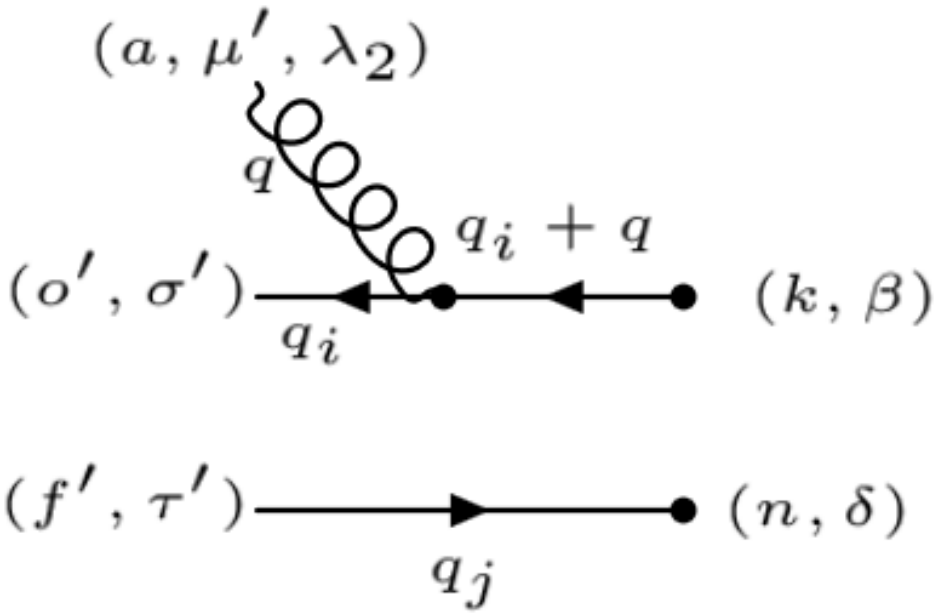
Tigran Saidnia

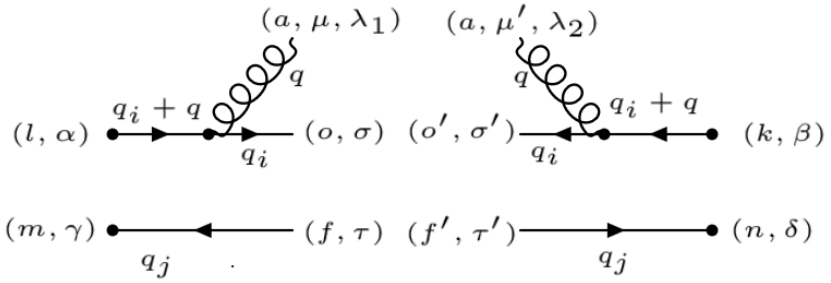
0.1 Quark/Antiquark gluon emission kernel



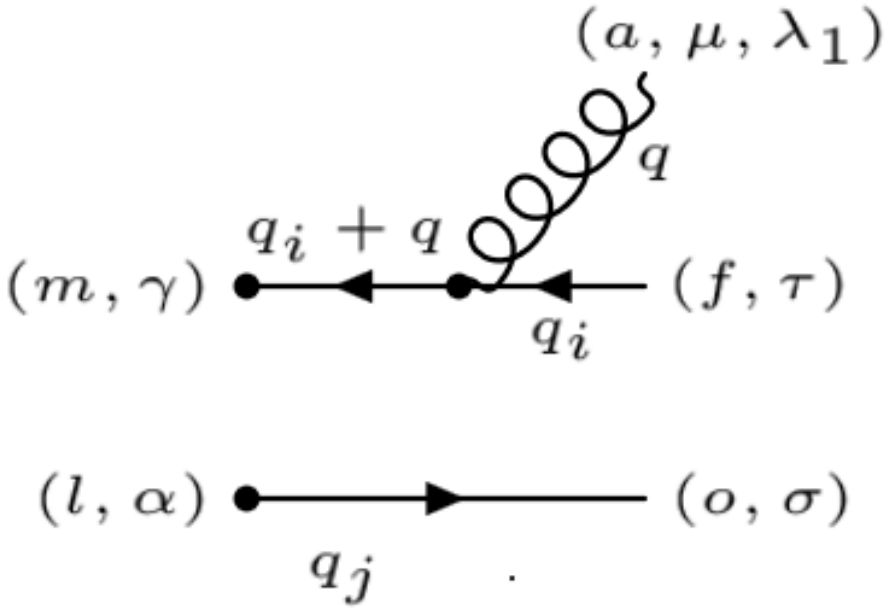
0.1.1 qg-$\bar{q}$

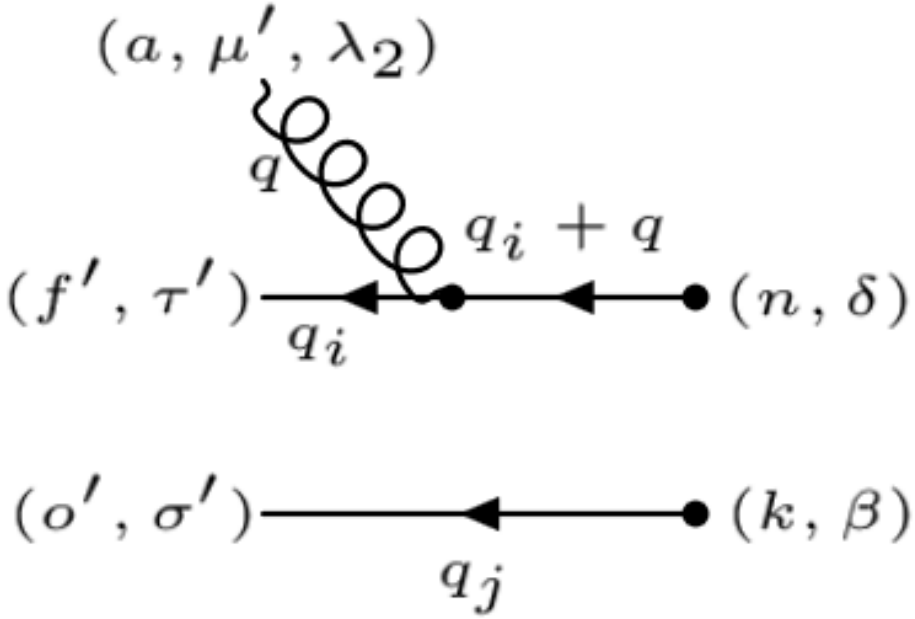


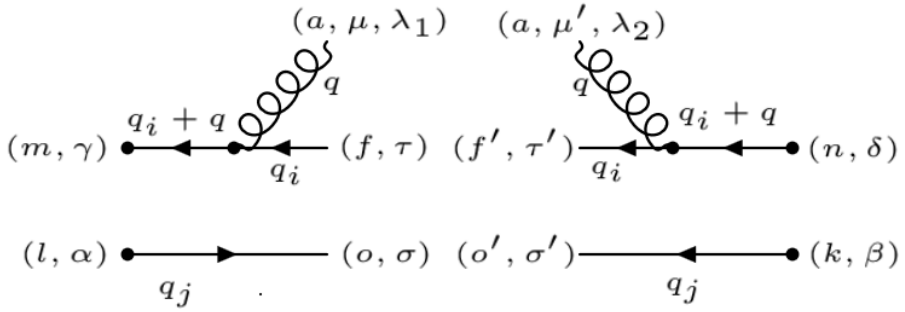

(a, μ', λ_2)
q
$q_i + q$
(o', σ')
(k, β)
q_i
(f', τ')
(n, δ)
q_j


(a, μ, λ_1)
(a, μ', λ_2)
q
q
$q_i + q$
(l, α)
(o, σ)
(o', σ')
$q_i + q$
(k, β)
q_i
q_i
(m, γ)
(f, τ)
(f', τ')
(n, δ)
q_j
q_j

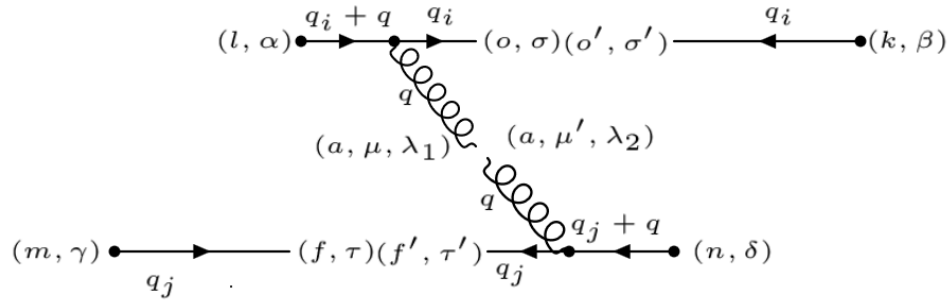
0.1.2 $\bar{q}$g-q


(a, μ, λ_1)
q
$q_i + q$
(m, γ)
(f, τ)
q_i
(l, α)
(o, σ)
q_j

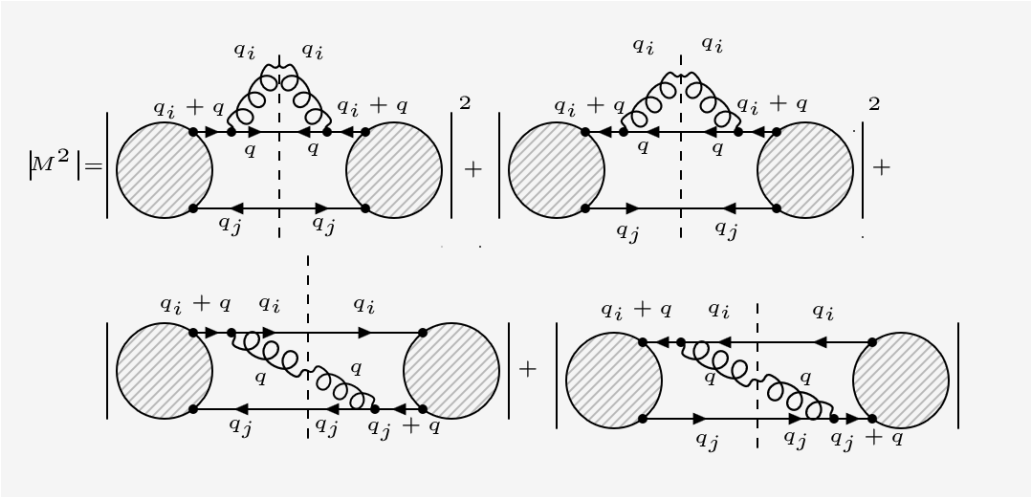

(a, μ', λ_2)
q
$q_i + q$
(f', τ')
(n, δ)
q_i
(o', σ')
(k, β)
q_j

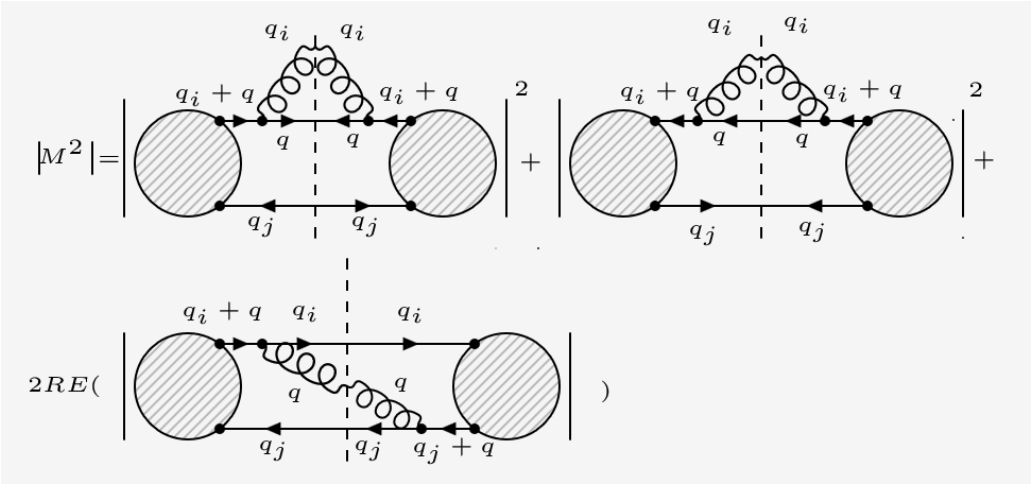


0.1.3 $M_1 M_2^\dagger$

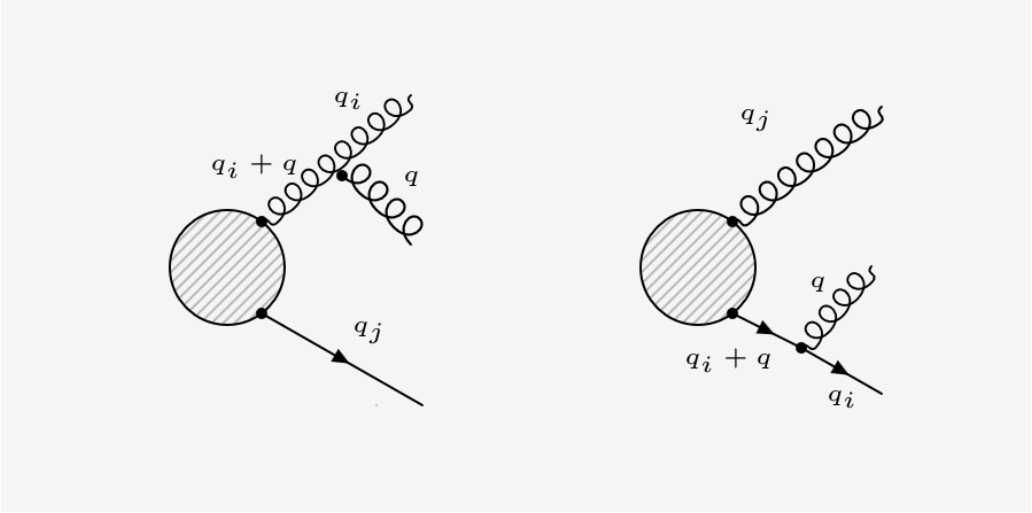


0.1.4 $|M^2|$





0.2 Quark/Gluon gluon emission kernel



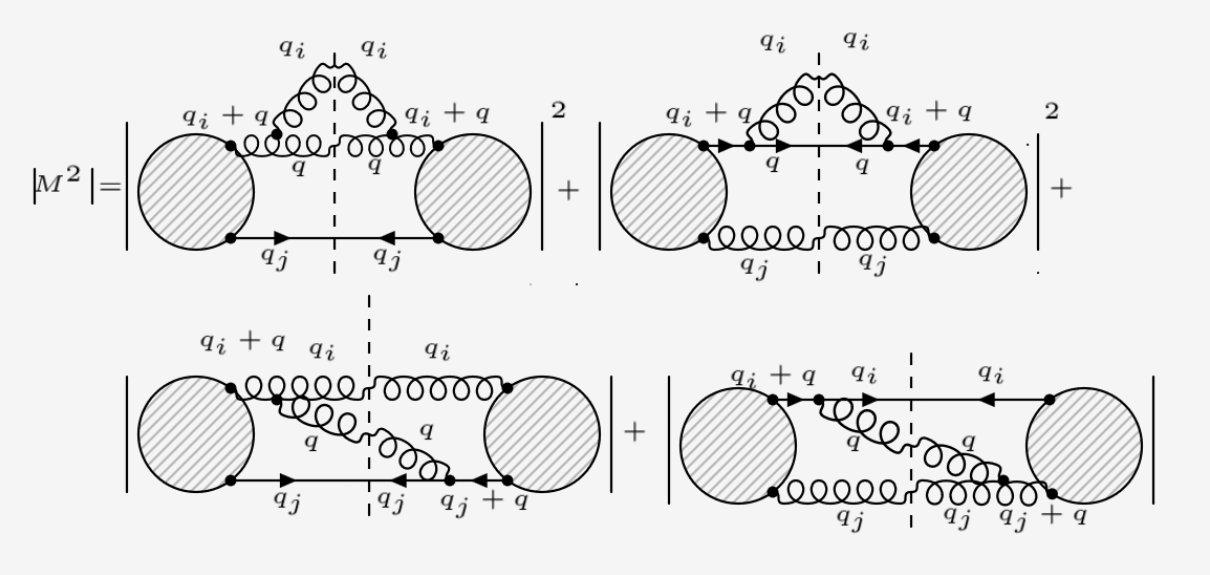


Abbildung 1: Die Landkarte.

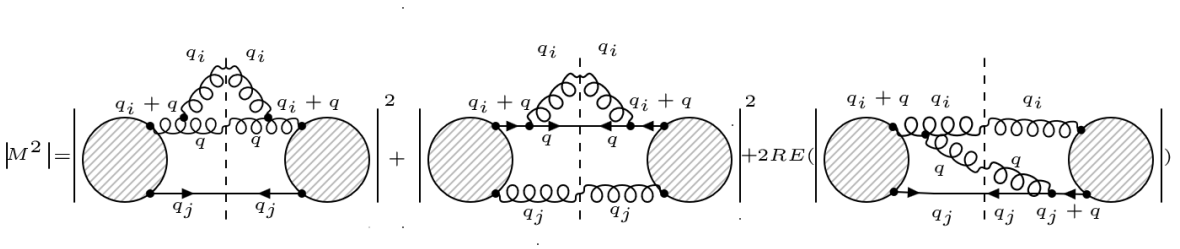


Abbildung 2: Die Landkarte.

Inhaltsverzeichnis