



Nuclear Theory

Quantum Spectrum of Cherenkov Glue

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Full quantum calculation of Cherenkov gluon radiation by quark and gluon currents and a Cherenkov decay of a gluon into a pair of Cherenkov gluons in transparent media is performed. Energy losses due to Cherenkov gluon radiation in high energy nuclear collisions are calculated. The angular distribution of the energy flow due to the radiation of Cherenkov gluons is analyzed.

Comments: 10 pages, 9 figures, misprints and references corrected, version accepted to Nuclear Physics A

Subjects: **Nuclear Theory (nucl-th)**; High Energy Physics - Phenomenology (hep-ph)

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