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First complete NLL BFKL calculation of Mueller Navelet jets at LHC

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We calculate cross section and azimuthal decorrelation of Mueller Navelet jets at the LHC in the complete next-to-leading order BFKL framework, i.e. including next-to-leading corrections to the Green's function as well as next-to-leading corrections to the Mueller Navelet vertices.

The obtained results for standard observables proposed for studies of Mueller Navelet jets show that both sources of corrections are of equal, big importance for final magnitude and final behavior of observables. The astonishing conclusion of our analysis is that the observables obtained within the complete next-to-leading order BFKL framework of the present work are quite similar to the same observables obtained within next-to-leading logarithm DGLAP type treatment.

This fact sheds doubts on general belief that the studies of Mueller Navelet jets at the LHC will lead to clear discrimination between the BFKL and the DGLAP dynamics.

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