

# Service de Physique Nucléaire



## Séminaire

le vendredi 11 octobre 2013 à 11h00

CEA Saclay, Orme des Merisiers, Bât. 703, Salle 135

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### Three-dimensional structure of hadrons through hard exclusive processes

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Hard exclusive processes are central in order to get access to the three-dimensional structure of hadrons in terms of quarks and gluons. We review their modern theoretical background. The collinear factorization approach is presented and illustrated, including deep virtual Compton scattering (DVCS), non-exotic and exotic meson electroproduction. We focus in particular on the threshold resummation effects involved in the DVCS coefficient functions. To illustrate the problem of dealing with power corrections to the scattering amplitudes, we consider the chiral-odd pion generalized parton distributions up to twist 5. We then provide a short survey of  $k_t$ -factorization in the limit of asymptotical center-of-mass energies. This is further illustrated by the study of power corrections and saturation effects in exclusive vector meson electroproduction at HERA, of interest in view of the future EIC and LHeC projects.

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*Le café sera servi 10 minutes avant*

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