

XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



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Energy Frontier Lepton-Hadron and Photon-Hadron Colliders: Luminosity and Physics

Construction of linear collider (or dedicated e-linac) or muon collider (or dedicated μ -ring) tangential to energy frontier hadron colliders will give opportunity to investigate lepton-hadron and photon-hadron interactions at tens-TeV center-of-mass energies. These lepton-hadron and photon-hadron colliders will essentially enlarge physics search potential of the hadron collider's host laboratory both in SM and BSM phenomena.

In this presentation main parameters of the LHC/FCC/SppC based ep, eA, $\mu\mu$, μA , γp and γA colliders will be discussed, together with their physics search potential. Certainly, these machines have great potential for clarifying QCD basics. Concerning BSM physics search, their potential exceeds that of corresponding lepton colliders essentially and is comparable (and complementary) with the potential of basic hadron colliders.

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