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Abstract for an Invited Paper for the APR21 Meeting of the American Physical Society

TMD Physics and Related Phenomena: Current Status and Future $Outlook^1$ DANIEL PITONYAK, Lebanon Valley Coll

In this talk I will review the current status of transverse momentum dependent (TMD) physics and related phenomena, including both unpolarized and polarized observables. Such studies give us insight into the 3-dimensional structure of hadrons. The focus of the talk will be on recent developments in theory and phenomenology regarding the extraction of TMD parton distribution functions and fragmentation functions (TMDs). The talk will also cover connections of TMDs to aspects of high-energy physics and lattice QCD. Some upcoming measurements at existing and future facilities, and their impact on TMD physics, will also be highlighted.

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