



Figure 3 – Lund Jet Planes in the k_T variable for light jets (left) and B-tagged jets (right). The suppression of small angle emissions for the higher mass jet initiators provides a direct observation of the dead cone effect.

Acknowledgments

I would like to strongly thank the organizers of Moriond QCD for thought-provoking and well-ran environment to discuss many interesting physics topics. Additionally, I would like to thank the LHCb collaboration for the opportunity to share the exciting new results shared in these proceedings. Finally, I would like to acknowledge the funding support of the United States National Science Foundation which made travel for this opportunity possible.

References

- 1. Georges Aad et al. Phys. Lett. B, 716:1–29, 2012.
- 2. Serguei Chatrchyan et al. Phys. Lett. B, 716:30-61, 2012.
- 3. Mary K. Gaillard, Paul D. Grannis, and Frank J. Sciulli. Rev. Mod. Phys., 71:S96–S111, 1999.
- 4. LHCb. Alcm public analysis viewer: Qcd, electroweak and exotica, 2025.
- 5. LHCb Collaboration. JINST, 3:S08005, 2008. Also published by CERN Geneva in 2010.
- 6. Roel Aaij et al. Int. J. Mod. Phys. A, 30(07):1530022, 2015.
- 7. Roel Aaij et al. JINST, 19(05):P05065, 2024.
- 8. Steven Weinberg. Phys. Rev. Lett., 19:1264–1266, Nov 1967.
- 9. R. Aaij et al. JHEP, 12:026, 2024.
- 10. The LHCb collaboration. Journal of Instrumentation, 19(03):P03010, mar 2024.
- 11. Yu L Dokshitzer, V A Khoze, and S I Troyan. *Journal of Physics G: Nuclear and Particle Physics*, 17(10):1602, oct 1991.
- 12. Leticia Cunqueiro and Mateusz Płoskoń. Phys. Rev. D, 99:074027, Apr 2019.
- 13. ALICE Collaboration. Nature, 605(7910):440-446, 2022.
- 14. Simone Caletti, Andrew J. Larkoski, Simone Marzani, and Daniel Reichelt. *Journal of High Energy Physics*, 2022(10):158, 2022.
- 15. Daniel Craik, Phil Ilten, Daniel Johnson, and Mike Williams. LHCb future dark-sector sensitivity projections for Snowmass 2021. In *Snowmass 2021*, 3 2022.
- 16. LHCb Collaboration. *CDS:2923551*, 2025.