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Using Selection Criteria to Optimize Analysis in High Energy Physics CHRISTOPHER DAVIS, DAVID TOBACK, Texas A&M University, JOEL WALKER, Sam Houston State University, DANIEL CRUZ, Texas A&M University, JACOB HILL, Sam Houston State University — In Experimental High Energy Physics, searches for new particle typically involve rejecting events that pass certain selection criteria. We have studied new methods for improving the sensitivity of our searches in a general way. In particular, the assumption that two requirements are always better than one turns out to not always be true, but can be if optimized properly.

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