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# **Building a statistical test for energetic splitting in cosmic ray cascades**

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The objective of this project is to determine well-defined statistical criteria to quantify, in the form of a statistical hypothesis test, when a given partitioning of a certain amount into several parcels offers significant statistical evidence that a lack of uniformity has occurred in the division process. This problem, apparently of an exclusively mathematical-statistical nature, is actually relevant for characterizing the validity of a simplifying physical hypothesis for the analysis of cosmic ray showers, whereby there would be asymmetry in the division of a particle's energy between its products in the initial stages of these cascades.