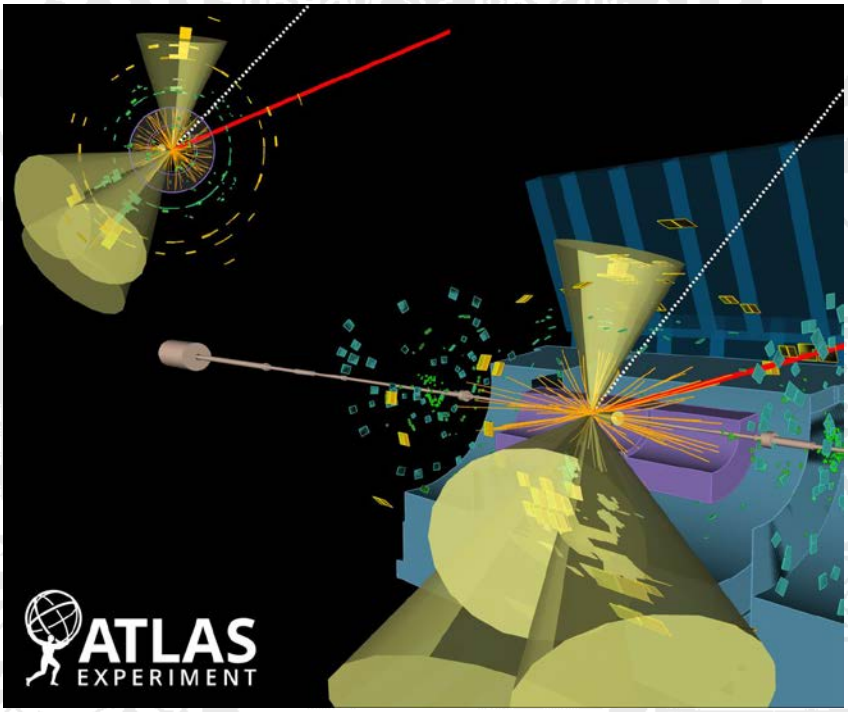
PHYSIKALISCHES KOLLOQUIUM

AM 23. OKTOBER 2017 UM 17 UHR C.T.

IM GROßEN HÖRSAAL



SUPERSYMMETRY IN LIGHT OF THE LHC

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The Standard Model of particle physics has been a phenomenal success since its inception. Its predictions for electromagnetic, weak and strong interactions have been confirmed by experiment again and again. But gravity not being included as well as strong evidence for dark matter in the universe, which the Standard Model can not explain, are just two of the many hints that it is not the final theory. One of the best motivated extensions of the Standard Model is supersymmetry, providing an elegant mathematical structure to solve many of these problems, as well as the potential for a rich phenomenology.

An introduction to the concepts of supersymmetry and its motivations will be provided, followed by a discussion of searches for supersymmetry at the LHC, including the evolution of experimental outcomes, techniques and guiding principles from the start of data taking up to the most recent results.