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PROTON DECAY

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Abstract—In this review, the present status of proton decay is discussed in some detail. The theoretical reasons for expecting proton decay are analyzed and different grand unified models with and without supersymmetry are confronted with experiment. While the
seems to have severe problems, supersymmetric grand unified models

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FUSION DYNAMICS IN HEAVY ION COLLISIONS

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INTRODUCTION

As soon as heavy ion beams became available, physicists tried to perform the fusion of two nuclei. At first only light ions, with a kinetic energy not too far above the Coulomb barrier separating the projectile from the target, were accelerated. In this case the fusion of two heavy ions leads to the formation of a compound nucleus. It means that all the nucleons have participated in the reaction and have formed a nucleus which has completely forgotten its formation mode except for some macroscopic quantities such as excitation energy, angular momentum, etc. which have to fulfill conservation laws. As suggested by Bohr,[1] several experiments were performed to show that the properties of a compound nucleus do not

POSITRON CREATION IN HEAVY-ION COLLISIONS

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