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Loss Cone Evolution and Particle Escape In Collapsing Magnetic Trap Models

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Collapsing Magnetic Traps (CMTs) have been suggested as one possible mechanism responsible for the acceleration of high-energy particles during solar flares. It has been predicted on the basis of simple CMT models that the majority of the particles should escape towards the end of the trap collapse. This, however, is not seen in the study of particle orbits in more sophisticated trap models, which show that in particular the highest-energy particles remain trapped at all times. It is shown that this apparent contradiction can be resolved by a comparison of the assumptions made in the different CMT models.