

Abstract Submitted
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Cooling of particle ensembles with cooperative effects GUIN-DAR LIN, SUSANNE YELIN, ITAMP, Harvard-Smithsonian Center for Astrophysics — Superradiance is known as speed-up of decay of an excited particle, essentially due to presence of near particles. Such cooperative effects can facilitate the cooling efficiency for certain particles whose transition coupling strength is usually very weak so that the normal laser cooling cannot directly apply. We investigate the possibility and scenarios where this superradiance-assisted cooling can be put into practice.

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