

Dynamical evolution of star clusters in transient spiral arms

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Abstract. Star clusters are one of fundamental building blocks of galactic disks. They form in a potential well of spiral arms and travel in the disk. We performed N-body simulation of star clusters in stellar disk with “live” spiral arms. In this simulation, both star clusters and stellar disks are modeled as N-body systems. We found that star clusters migrated in the galactic disk in a timescale of their galactic rotation. The tidal tails spread over a few kpc, but they might be detectable if we are able to measure their velocity.
