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Can we verify the Dissolving Star Cluster Model as formation channel for dSph galaxies?

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We have proposed a formation scenario for dSph galaxies which does not include any interaction with other galaxies, called the Dissolving Star Cluster Model. In this model the gas, accumulating inside the dark matter halo of the dwarf forms stars in form of small star clusters and associations which orbit the central region of the dark matter halo. These small entities do not survive for long and spread their stars along their trajectories, thereby forming the luminous component of the dSph galaxy as we see today. Our numerical simulations have shown that the resulting objects resemble all observables of dSph galaxies very well and let to the prediction of stellar streams inside the dwarfs which should survive until the present day.

Using observational data from Leo I we are now able to test the predictions from our model with real data. Using a special software to detect stellar streams from the radial velocity measurements of stars inside Leo I we are able to detect more streams than what simple noise would predict. The projected angular momentum directions of those streams are in concordance with our model and seem to rule out the destroyed dwarf disc scenario.

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