A SYNOPTIC VIEW OF THE MAGELLANIC CLOUDS: VMC, GAIA AND BEYOND

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A disrupting open cluster far into the Milky Way halo: star formation in the Magellanic stream?

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We have found a young (\sim 130 Myr), metal-poor ([Fe/H] \sim -1.1) stellar association at a heliocentric distance D \sim 29 kpc, placing it far into the Milky Way halo. At its present Galactocentric position, the association is near the leading arm of the gas stream emanating from the Magellanic cloud system, but is located \sim 60 degrees from the Large Magellanic Cloud (LMC) center on the other side of the Milky Way disk. The estimated age of the cluster is consistent with the time of last passage of the leading arm gas through the Galactic midplane, and we therefore speculate that this star-formation event was triggered by its the last disk midplane passage. Most details of this idea remain a puzzle. However it formed, the discovery of a young stellar cluster in the Milky Way halo presents an interesting opportunity for study.