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Stellar streams in the solar neighbourhood

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Gaia eDR3 (and soon DR3) has revealed a number of kinematic groups in the solar neighbourhood. Some of these are now well known major accretion events such as Gaia-Enceladus-Sausage and Sequoia. Other smaller groups have been identified and their nature is not fully understood. Here I will present a method to extend the local spectroscopic sample by extrapolating the orbits of less-prominent groups identified in velocity space. This method allows for the identification of potential new members of such groups using only tangential velocities and parallaxes alone i.e. without the need of additional radial velocities. This technique can enable the targeted follow-up of potential members of cold stellar streams that happen to cross the solar neighbourhood. As a test case, I will present the results for one small group of stars, clustered in velocity space, that is likely a unreported cold stellar stream.

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