Notre Dame Science
Department of Physics

STARS OUTSIDE GALAXIES

Astrophysics Seminar

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12:30 P.M. NSH 184

I will report the latest results of our project searching for stars born in clusters outside galaxies. Very often, when galaxies collide/merge/interact, their neutral gas, HI, is stripped out of them and found in extended tidal tails in the intergalactic medium. At first glance these gas clouds look empty and even detached from the galaxies. Recently, we have found out that this is not always the case. We used the GALEX ultraviolet satellite to search within HI tails in a sample of interacting galaxies and detected several young stellar clusters and even dwarf galaxies in the process of formation. Our team has analyzed multiwavelength data (Gemini, SDSS, VATT) of these objects showing that they are young and metal rich. Our main conclusion is that they were formed “in situ” from pre-enriched material that was ejected from the galaxies during interaction. These nurseries can be (i) the precursors of globular clusters, (ii) dwarf galaxies in the process of formation or (iii) dissolve and not remain gravitationally bound, yielding only very sparse star streams.

All interested persons are cordially invited to attend.