

Fall 2018 Colloquium

Department of Physics & Astronomy, TAMU-Commerce

Sep 27, Thursday, 4-5 PM in Science Building 127

(coffee and cookies will be served at 3:50 PM)

Astrophysics, Nuclear physics

Symmetry energy in nuclear matter and in neutron star matter

Dr. Jorge Lopez

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Dr. Jorge A. Lopez earned BS and MS degrees at the University of Texas at El Paso, and a PhD at the Texas A&M University. He was a postdoctoral researcher at the Niels Bohr Institute and at the Lawrence Berkeley National Lab. His area of research has been nuclear physics with specialization in heavy ion reactions, but he has also performed research in materials science. In 2018 he received the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring from the White House, and was inducted into the Academy of Distinguished Former

Students of Texas A&M University. More information about Dr. Lopez can be found at

<https://academics.utep.edu/Default.aspx?tabid=18741>

Abstract

Results from classical molecular dynamics simulations of infinite nuclear systems with varying density, temperature and isospin content are used to calculate the symmetry energy at low nuclear densities at several temperatures. The results show an excellent agreement with the experimental data (from Texas A&M Cyclotron Institute) and corroborate the claim that the formation of clusters has a strong influence on the symmetry energy in the liquid–gas coexistence region.