

SAIP2014



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Compact stars for NITheP internship programme

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Abstract :

We report on an undergraduate and Honours student project conducted in the November/December 2013 NITheP internship programme. The aim of the project is to establish equations of state for white dwarfs and neutron stars for computing mass-radius relations as well as corresponding maximum masses. First, white dwarfs are described by a Fermi gas model of degenerate electrons and neutrons and effects from general relativity are examined. For neutron star matter, the influence of strong nucleon-nucleon interactions is studied. Finally, masses and radii of neutron stars are computed for given central pressure.

Award :

No

Level :

N?A

Supervisor :

N/A

Paper :

Yes

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