

Effective field theory with genuine many-body forces and tidal effect in neutron stars

In this contribution we combined our predictions for the tidal parameter with recent gravitational wave observation of merging system of binary neutron stars of the event GW170817 with quasi universal relations between the maximum mass of rotating and nonrotating neutron stars. Our results indicate that predictions of the tidal parameter represent an useful constraint of the EoS of neutron star matter.

Primary author: RAZEIRA, M. (Universidade Federal do PAMPA (UNIPAMPA), Caçapava do Sul, RS, Brazil)

Presenters: BODMANN, B. (Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil); VASCONCELLOS, C.A.Z. (Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil); HADJIMICHEF, D. (Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil); KÖPP, F. (Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil); VOLKMER, G. (Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil); DEGRAZIA, G.A. (Universidade Federal de Santa Maria (UFSM), Santa Maria, RS, Brazil); RAZEIRA, M. (Universidade Federal do PAMPA (UNIPAMPA), Caçapava do Sul, RS, Brazil); MACHADO, M.V.T. (Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil)