

Compstar@iberia - Final Report

Summary

The main objective of the COMPSTAR@IBERIA meeting was to strengthen and to increase the collaboration among the Spanish and Portuguese members of the COMPSTAR ESF Research Networking Program. The meeting, with 15 talks of 30min plus 5 min discussion and a round table, was considered to be successful and will continue to be organized once per year. The next one will occur in Salamanca or Oviedo.

The main areas which have been discussed are the following:

- 1-. Neutron star matter equation of state
- 2-. Magnetic fields in neutron stars
- 3-. Low density equation of state and properties of the neutron star crust

Some new collaborations have started during the meeting.

Oral communications

Camille Ducoin: "Symmetry energy and the core-crust transition in neutron stars"

Domenico Logoteta : "Effects of quark matter nucleation on the evolution of proto-neutron stars"

Sidney Avacini : "Modeling the warm pasta phase within the relativistic Thomas-Fermi"

Daniel Peña : "Nuclear structure in strong magnetic fields: nuclei in the crust of a magnetar"

Daniel Galaviz: Experimental studies for nucleosynthesis on the rp-process"

Fabrizio Grill:"Specific heat of nuclear matter in the inner crust of neutron stars"

Artur Polls: "Nucleon-nucleon correlations and the depletion of the nuclear Fermi sea"

Xavier Viñas: "Neutron skin thickness: Surface or bulk effect ?"

Maria Angeles Perez-Garcia: "Low temperature magnetized nuclear plasmas in neutron stars"

Saturnino Marcos: "Propiedades magnéticas de estrellas de neutrones en una aproximación Hartree-Fock relativista"

Joaquin Diaz-Alonso : "Solitones no-topologicos y modelos de estructura hadronica"

José Pons: "Evolución magneto-térmica de estrellas de neutrones"

Daniele Viganò: "Soluciones estaticas de la magnetosfera en los magnetars"

Constança Providencia: Dense stellar matter under strong magnetic fields

Isaac Vidaña: "Spinodal Instabilities of asymmetric nuclear matter at finite temperatures within the BHF"

Round Table

During the round table, information about the RNP Compstar was given and discussed. The Compstar EOS project was explained. It was suggested that all those working on the EOS of nuclear matter could participate in this project and could get more information from the coordinators of each subarea of the project. Information about the next Compstar School in May and about the possibility of getting a grant for short visits to research groups integrating the net was also referred.

Participants

The meeting had a total of 25 participants from 11 different institutions and 5 different countries, including 6 PhD students and 5 young post-doctoral researchers. The participants came from the following universities:

University of Coimbra

Constança Providencia, Isaac Vidaña, Silvia Chiacchiera, Camille Ducoin, Domenico Logoteta, Márcio Ferreira, Lucília Brito, Mário Santos, Rafael Cabagnoli; Manuel Fiolhais

Other Universities

Rafael Camargo: Universidade Federal de Santa Catarina and University of Coimbra
Sidney Avacini: Universidade Federal de Santa Catarina
Lidia Ferreira: Instituto Superior Técnico, Lisboa
Maria Angeles Perez-Garcia: Universidade de Salamanca
Artur Polls : Universidade de Barcelona
Xavier Viñas :Universidade de Barcelona
José Pons: Universidade de Alicante
Saturnino Marcos: Universidade de Santander
Daniel Peña: IPN-Orsay
Daniel Galaviz: Universidade Nova de Lisboa
Fabrizio Grill: Universidade de Milano
Joaquin Diaz-Alonso :Universidade de Oviedo
Daniele Viganò: Universidade de Alicante
Ning Yu : Instituto Superior Técnico, Lisboa
Lysiane Mornas: Universidade de Oviedo

COMPSTAR@IBERIA

Primer encuentro LusoEspañol de los miembros de COMPSTAR
Primeiro encontro LusoEspanhol dos membros de COMPSTAR
Octubre/Octubro 1516 2010
Universidade de Coimbra, Portugal

Programa/Programa

Viernes/6a Feira 15/10/2010

14:0015:00 Llegada y bienvenida/Chegada e boas vindas

Sesión I/Sessão I: 15:0017:00

Camille Ducoin : "Symmetry energy and the corecrust transition in neutron stars"

Isaac Vidaña : "Spinodal instabilities of asymmetric nuclear matter within the Brueckner-Hartree-Fock approach"

Fabrizio Grill : "Specific heat of nuclear matter in the inner crust of neutron stars"

Café: 17:0017:30

Sesión II/Sessão II: 17:3019:15

Sidney Avancini : "Modeling the warm pasta phase within the relativistic ThomasFermi approximation"

Xavier Viñas : "Neutron skin thickness: Surface or bulk effect ?"

Constança Providência : "Dense stellar matter under strong magnetic fields"

Cena en/Jantar em "Justícia e Paz": 20:00

Sábado/Sábado 16/10/2010

Sesión III/Sessão III: 9:0010:45

José Pons : "Evolución magnetotérmica de estrellas de neutrones"

Daniele Viganò : "Soluciones estaticas de la magnetosfera en los magnetars"

María Ángeles PérezGarcía : "Low temperature magnetized nuclear plasmas in neutron stars"

Café: 10:4511:15

Sesión IV/Sessão IV: 11:1513:00

Daniel Peña : "Nuclear structure in strong magnetic fields: nuclei in the crust of a magnetar"

Saturnino Marcos : "Propiedades magnéticas de estrellas de neutrones en una aproximación HartreeFock relativista"

Artur Polls : "Nucleon-nucleon correlations and the depletion of the nuclear Fermi sea"

Comida en/Almoço em "Justícia e Paz": 13:0014:30

Sesión V/Sessão V: 14:3016:15

Domenico Logoteta : "Effects of quark matter nucleation on the evolution of protoneutron stars"

Daniel Galaviz : "Experimental studies for nucleosynthesis on the rprocess"

Joaquin DiazAlonso : "Solitones notopologicos y modelos de estructura hadronica" ?

Café: 16:1516:45

Mesa redonda/Mesa Redonda: 16:4518:45

Cena Social en/Jantar Social em "O cova funda": 20:00